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ANNUAL BULLETIN

OF

COLORADO COLLEGE

AND

CUTLER ACADEMY.

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PUBLISHED BY THE CORPS OF INSTRUCTION, WITH THE APPROVAL  
OF THE BOARD OF TRUSTEES.

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1889-94

COLORADO SPRINGS, MARCH 15, 1892.

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COLORADO SPRINGS, APRIL 2, 1890.



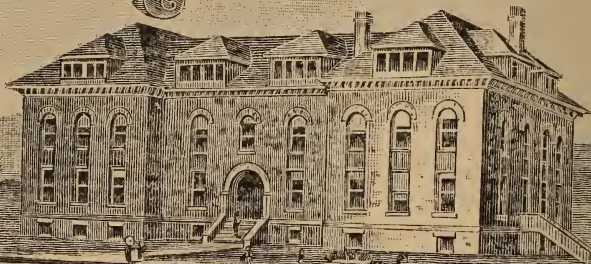
Palmer Hall



Pres'ts Residence



Hagerman Hall



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## ANNOUNCEMENT.

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Colorado College, chartered in 1874, has already its history of some years of excellent work. Since the accession of President Slocum, who took charge of it in October, 1888, the addition of several able men to its Faculty has increased its capacity for both literary and scientific training ; while its new stone building offers, at a low rate, a provision for the board and lodging of students coming from a distance—an accommodation which has hitherto been much desired. Further increase is soon to be made, both in the number of buildings and of instructors. In respect to such aids to study as collections, library, and scientific instruments, important accessions have lately been received, and others are expected. The quality of work demanded of the student is not inferior to that done in the standard Eastern colleges. In the associated Cutler Academy, students are prepared for any American institution of collegiate grade.

# CALENDAR.

1890.

June 19.. .....Thursday .....First entrance examinations.  
 Sept. 23 .....Tuesday.....Second entrance examinations.  
 Sept. 24.....Wednesday.....Fall term begins at 8:30 A. M.  
 Nov. 27 .....Thursday ..... } The Thanksgiving recess.  
 Nov. 28.....Friday..... }  
 Dec. 19.....Friday.....Christmas recess begins at 12:30 P. M.

1891.

Jan'y 6.....Tuesday.....Christmas recess ends at 8:30 A. M.  
 Jan'y 29 .....Thursday .....Day of Prayer for colleges.  
 Feb. 6.....Friday.....First semi-annual examination begins.  
 Feb. 11.....Wednesday.....First term ends at 12:30 P. M.  
 Feb. 12.....Thursday .....Second term begins at 8:30 A. M.  
 Mar. 25.....Wednesday.....Spring recess begins at 12:30 P. M.  
 April 2.....Thursday .....Spring recess ends at 8:30 A. M.  
 May 26.....Tuesday.....College prize declamations.  
 June 9.....Tuesday.....Second semi-annual examination begins.  
 June 14.....Sunday .....Baccalaureate sermon.  
 June 17.....Wednesday.....Commencement exercises.  
 June 18.....Thursday .....First entrance examinations.  
 Sept. 22.....Tuesday.....Second entrance examinations.



## TRUSTEES OF THE COLLEGE.

---

WILLIAM F. SLOCUM JR.,  
*President of the Board.*  
DR. B. F. D. ADAMS.  
REV. J. S. BLACK.  
REV. R. C. BRISTOL.  
JOHN CAMPBELL.  
SAMUEL CROOKS.  
JOHN CURR.  
HENRY CUTLER.  
GEORGE DE LA VERGNE.

JAMES M. GORDON.  
REV. JAMES B. GREGG.  
J. J. HAGERMAN.  
IRVING HOWBERT.  
WILLIAM S. JACKSON.  
F. L. MARTIN.  
REV. RICHARD MONTAGUE.  
GEORGE H. PARSONS.  
REV. CHARLES B. RICE.

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## EXECUTIVE COMMITTEE.

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J. J. HAGERMAN, *Chairman.*

GEORGE H. PARSONS, *Secretary.*

JOHN CURR.

WILLIAM S. JACKSON.

WILLIAM F. SLOCUM, JR.

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J. H. BARLOW, *Treasurer of the College.*

# FACULTY.

---

WILLIAM FREDERICK SLOCUM, JR.,  
*President and Professor of Philosophy.*

WINTHROP DUDLEY SHELDON,  
*Professor of Greek.*

FRANK HERBERT LOUD,  
*Professor of Mathematics and Astronomy.*

WILLIAM STRIEBY,  
*Professor of Chemistry and Metallurgy.*

GEORGE NATHANIEL MARDEN,  
*Professor of History.*

ELOISE WICKARD, (Librarian,)  
*Professor of English.*

GEORGE LINCOLN HENDRICKSON,  
*Professor of Latin.*

FLORIAN CAJORI,  
*Professor of Physics.*

ELIZABETH WEBSTER EATON,  
*Instructor in Modern Languages.*

OLIVER HUNTINGTON RICHARDSON,  
*Instructor in Political and Social Science.*

JESSE MARTIN ROBERTS,  
*Instructor in Mathematics.*

EFFIE ELAINE HEXT,  
*Instructor in Elocution.*

HENRY WILLIAM LAMB,  
*Assistant in the Chemical Laboratory.*

JAMES CHAMBERS DEVIN,  
*Assistant Librarian.*

*COLORADO COLLEGE.*



# REQUIREMENTS FOR ADMISSION

TO THE

## FRESHMAN CLASS.

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS

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1. IN ENGLISH.—The candidate will be required to write a short English composition,—correct in spelling, punctuation, grammar, division by paragraphs, and expression,—upon one of several subjects announced at the time of the examination. In 1890 the subjects will be drawn from one or more of the following works: Shakespeare's Julius Cæsar and Midsummer Night's Dream, Coleridge's Ancient Mariner, Longfellow's Evangeline, Macaulay's Essay on Lord Clive, Thackeray's English Humorists, Scott's Quentin Durward, George Eliot's Silas Marner, Hawthorne's House of Seven Gables. Every candidate is expected to be familiar with *all* the books in this list.

The candidate will also be required to *correct specimens of bad English* set for him at the time of the examination.

The works prescribed for the examination of 1891, 1892, and 1893 are as follows :\*—

*For 1891.*—Shakespeare's Julius Cæsar and Merchant of Venice, Coleridge's Ancient Mariner, Longfellow's Evangeline, Macaulay's Essay on Lord Clive, Irving's Alhambra, Scott's Old Mortality, George Eliot's Silas Marner, Hawthorne's House of Seven Gables.

*For 1892.*—Shakespeare's Julius Cæsar and As You Like It, Scott's Marmion, Longfellow's Courtship of Miles Standish, Addison's Sir Roger de Coverley Papers, Macaulay's

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\* These are the lists adopted by the Commission of Colleges in New England on Admission Examinations.



second Essay on the Earl of Chatham, Webster's first Bunker Hill Oration, Irving's Alhambra, Scott's Talisman, George Eliot's Scenes from Clerical Life, Hawthorne's House of Seven Gables.

*For 1893.*—Shakespeare's Julius Cæsar and Twelfth Night, Scott's Marmion, Longfellow's Courtship of Miles Standish, Addison's Sir Roger de Coverley Papers, Macaulay's second Essay on the Earl of Chatham, Emerson's American Scholar, Irving's Sketch Book, Scott's Ivanhoe, Dickens' David Copperfield.

2. IN GREEK.—(a.) A thorough knowledge of inflection, with the use of the accents, and the ordinary grammatical constructions. (b.) Four books of the Anabasis, or three books and Cook's Selections from the Cyropaedia. (c.) Three books of the Iliad, with prosody and dialectic forms. (d.) Translation at sight of average passages from Xenophon and Homer. (e.) The translation into Greek of a passage of connected discourse of moderate difficulty. (The first forty-four exercises in Allinson's Greek Prose Composition will indicate the nature of the work required.) (f.) Such a brief general view of Greek history as is contained in the revised edition of Pennell's History.

3. IN LATIN.—(a.) An accurate knowledge of the forms and of the ordinary phenomena of the syntax of the language. (b.) The translation at sight of average passages from Latin prose authors, and from the Eclogues or the Æneid of Vergil. (c.) The translation into Latin of a passage of connected English narrative, which for the examination in 1890 will be based upon some portion of either the second book of Cæsar's Gallic War, or Nepos' lives of Miltiades and Themistocles. (d.) An outline knowledge of the history of the Roman Republic.

4. IN MATHEMATICS.—(a) Algebra, through simultaneous quadratic equations. (b.) Elementary plane and solid Geometry, or as much as is contained in the first eight books of Wentworth's Geometry, revised edition.

5. IN PHYSICS.—The elements of the subject as contained, for example, in Gage's Elements of Physics.

6. IN FRENCH OR GERMAN (the candidate may offer either.) —Otto's French Grammar, Part I, or an equivalent, the translation at sight of simple French prose, a correct pronunciation and some practice in French composition; or Comfort's German Course, Part I, or an equivalent, translation at sight, pronunciation, and composition as in French.

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF PHILOSOPHY.

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In English, Latin, Mathematics, Physics, and French or German, the same as for the course leading to the Degree of Bachelor of Arts. Candidates for admission to this course need not offer Greek; in place of which they will be examined in the following subjects in addition.

1. IN CHEMISTRY.—Roscoe's Elementary Lessons in Chemistry will serve to indicate the amount required.

2. IN BOTANY.—Gray's Lessons (revised edition).

3. IN PHYSIOLOGY.—Martin's Elementary Course, or an equivalent.

4. IN AMERICAN HISTORY.—An outline knowledge of leading facts.

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## ENTRANCE EXAMINATIONS.

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Examinations for admission to the College, and also to the Cutler Academy, will be held at the close of the Spring term (June 19, 1890, at 9 a. m.), and again at the beginning of the Fall term (September 23, 1890, at 9 a. m.). No examinations will be held between these dates, but delayed examinations may be held after the beginning of the Fall term

for the accommodation of students who for good reason have been unable to attend at the regular time.

For the convenience of students residing at a distance, examinations will be held under the direction of authorized persons at various points in and near the State, as need may require. The cities of Cheyenne, Wyo., Denver, Pueblo, Trinidad, Leadville, Montrose, and Grand Junction, Colo., and Las Vegas, N. M., are points where such arrangements can readily be made, and others may be added if necessary. But students who desire examinations at these or other points should notify the President at least three weeks in advance of the time of the regular examination.

A prize of twenty-five dollars is offered for the best examination for admission to the Freshman Class.

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## ADMISSION TO ADVANCED STANDING.

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Students will be received to advanced classes on examination in the studies of the preceding years. The Faculty may at their discretion receive certificates from other colleges or schools as evidence that the student has satisfactorily pursued these or equivalent studies.

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## COURSES OF STUDY.

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Two courses of study are offered in the College. One, leading to the degree of Bachelor of Arts, corresponds to the courses of the best Eastern colleges leading to the same degree. The other, leading to the degree of Bachelor of Philosophy, includes less Latin and no Greek, but is more complete in Natural Science and Modern Languages.

The following is a tabular view of the two courses of study, the figures after each subject indicating the number of recitations or lectures per week:

COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS.	COURSE LEADING TO THE DEGREE OF BACHELOR OF PHILOSOPHY.
<i>Freshman Class.</i>	<i>Freshman Class.</i>
Greek..... 4	Biology..... 4
Latin..... 4	Latin..... 4
Mathematics..... 3	Mathematics..... 3
French or German.. .... 3	French or German..... 3
English..... 3	English..... 3
<i>Sophomore Class.</i>	<i>Sophomore Class.</i>
Greek..... 3	Geology..... 3
Latin..... 3	Mineralogy ; Biology, or Chemistry } ..... 3
Chemistry..... 4	
Mathematics; Mechanics..... 4	French or German..... 4
English..... 2	Mathematics; Mechanics..... 4
<i>Junior Class.</i>	<i>Junior Class.</i>
Physics..... 4	Physics..... 4
Psychology..... 3	Psychology..... 3
History..... 3	History..... 3
Political Economy..... 3	Political Economy..... 3
Elective ..... 4	Elective..... 4
<i>Senior Class</i>	<i>Senior Class.</i>
History of Philosophy; Ethics... 4	History of Philosophy; Ethics... 4
Astronomy (first term)..... 4	Astronomy (first term)..... 4
Elective (first term)..... 8	Elective (first term)..... 8
Elective (second term).....12	Elective (second term).....12

For electives offered see the several departments below.

## PHILOSOPHY.

The work in this department, which is conducted by President Slocum, commences the first of the Junior year and continues during the remainder of the College course.

It begins with a study of the human mind, following, as far as any text-book is used, Porter's Elements of Intellectual Science, with collateral study of other authors. The inves-

tigations in introspective psychology are based upon the facts of experience, and the aim will be to gain clear conceptions of the powers, functions, and activities of the soul. Particular attention is given to the relation of mental phenomena to physiology, and to the extent to which modern experiments have traced the physical basis of the higher faculties.

During the last term of Junior year the study of Logic will be undertaken, beginning with Jevons' "Elementary Lessons in Logic," and every effort possible will be made to give the student a knowledge of the principles and method of correct habits of thinking.

At the beginning of Senior year, the class will commence the History of Philosophy, with the purpose of studying the movements of human thought and the relation of permanent ideas to the development of the race. The effort will be made to secure a clear and comprehensive idea of philosophy, tracing it from the early Greek speculations in regard to the origin of knowledge, to the Socratic movement, and the writings of Plato and Aristotle. This will be followed by an examination of Neo-Platonism and the movement at Alexandria.

Modern Philosophy will then be studied, noting the influence of Scholasticism, the work of Bacon and the importance of the Deductive Method, the relation of Idealism to Realism, and especial attention will be paid to Leibnitz, Kant, and Hegel.

This will lead to a study of the fundamental questions of ethics and the claims of Christianity.

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## GREEK.

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The studies in this department extend through three years, of which the first two are required of all candidates for the degree of Bachelor of Arts, while the work of the Junior year is elective.



In the choice of works to be read, and in the method of treatment, the course is designed to give the student a broad range of view of each individual author, and of Greek literature in its leading departments and as a whole. Each writer is studied with reference to his place in the thought and life of his time. From time to time a careful written translation and annotation of some selection is required, and in the daily oral translation special pains is taken to form the habit of rendering into idiomatic, well-chosen English.

During the Freshman year the following authors are read: Homer's *Odyssey*, illustrating the Old Ionic, or Epic, form of the literature; Herodotus, the New Ionic; selected orations of Lysias, and the *Apology* of Socrates, and *Crito*, as representative of the Attic form. The *Apology* and the *Crito* are of special interest, as introducing the student to the personality of Socrates. Using Jebb's *Introduction* as a basis, some questions in the critical study of Homer are discussed with the class in the *Odyssey*. Especially in connection with the reading of Lysias, there is such review of the more important points in etymology and syntax as may be found necessary, and one exercise a week is given to practice in writing connected discourse. The subject of moods and tenses is studied in connection with Professor Goodwin's work.

In the Sophomore year, the student reads a play each of Sophocles, Æschylus and Euripides, and Demosthenes *On the Crown*, or selections from his *Philippics*. In connection with the plays read, the mode of their representation, the structure and metrical form of each, their literary characteristics, the myths involved, and also the history of the Greek drama, are the principal topics of study. In connection with the political orations of Demosthenes, a brief survey is had of the events to which they relate, and of the history of Greek oratory; each oration read is subjected to a careful analysis of the course of the argument and is studied throughout with primary reference to its rhetorical characteristics. During the first half-year one recitation per week is

given to the history of Greek literature, and during the second half one recitation to selected topics in the political history of Greece.

The elective work of the Junior year is arranged as follows:

FIRST HALF-YEAR.—(1.) Hellenistic Greek: a philological interpretation of the Gospel of John, and of one of Paul's Epistles; or

(2.) The history of Greek philosophy, with selections from Plato and Aristotle in the original and in English.

SECOND HALF-YEAR.—(1.) The Clouds of Aristophanes, or selections from Lucian, and the Fifth Book of Thucydides; or

(2.) Greek Archæology, with special reference to Greek art, illustrated by photographs and with the hydro-oxygen lantern; Collignon's Manual, and collateral reading.

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## LATIN.\*

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The aim of the instruction in Latin is primarily to give the student such a reading-knowledge of the language as shall serve as an introduction to further literary, philological, historical, or legal studies. To acquiring this practical mastery of the language all else is subordinated, though the study of the historical and legal aspects of Roman civilization, as well as of the private life of Rome, is not neglected.

The Freshman year is devoted to readings in class from Livy, from the popular philosophical writings of Cicero, and from the Odes of Horace. One hour a week is devoted to the historical study of Roman literature. This course will consist of lectures by the Professor of Latin and will be supplemented by private readings, on the part of the students, from the translated works of the authors discussed. In ad-

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\*The pronunciation of Latin used is in general the so-called "Roman Method."

dition, a series of private readings in the original, from the writings of Latin prose authors, is assigned to each student, reports of which are required from time to time. No special recitations are devoted to Latin writing, for it is believed that it can be pursued with more profit and pleasure in connection with the daily readings from classical authors; therefore English sentences and narrative, based upon the subject matter of the Latin author in hand, are assigned daily for translation into Latin, and great importance is attached to this work.

In the first half of the Sophomore year, selections from the Satires and Epistles of Horace and from the Annals of Tacitus will be read, while the second half-year will be devoted to a study of Latin comedy, and plays of both Plautus and Terence will be read. Private readings in the original will be continued, but in the Sophomore year Latin poets will be assigned. In this year one hour of each week will be devoted to Roman history, special attention being given to the development of institutions and the public law of Rome.

In the Junior and Senior years, special elective courses may be arranged for those especially who wish to do advanced work in Latin with a view to teaching the language, and in the second half of the Senior year an elective course of weekly lectures on Roman law will be offered. For a list of the journals relating to the department of Latin, see page 42.

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## ENGLISH.

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In the Freshman year, selected essays from Addison to Ruskin form a basis for the study of prose literature and rhetorical analysis, and as a guide for this work Minto's Manual of English Prose Literature is used. Four plays of Shakespeare are also studied, and much collateral reading is done in connection with the required work in composition. The latter part of the year will be largely given to the history

of English and American literature, followed in a text-book and by lectures.

In the Sophomore year, Anglo-Saxon and early English are studied and selections from early English writers will be required, and much attention will be given to argumentative discourse, dissertation, and oration.

An elective course, three hours weekly, in modern English literature—from 1688 to the present time—is offered in the Junior year. In the Senior year, an elective course of two hours per week is devoted to the study of masterpieces in English. Instruction in the last two years is given mainly by lectures.

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## FRENCH AND GERMAN.

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The object of the course is to make ready and appreciative readers of the languages and also to furnish a basis on which a speaking knowledge of them may be rapidly acquired. As far as possible, the language studied will be the medium of instruction in the class-room. Attention is given to correct writing, the study of idioms and synonyms, translation from English, original composition in each language and to the study of its literature.

Either French or German is required for admission to College, and the language which was offered at the entrance examination will be continued three hours weekly throughout the Freshman year. The course, in detail, is as follows:

*In French*—French grammar, selected modern French plays, "Literature contemporaine," two classic French plays, French literature and conversation.

*In German*—Otto's German Reader, Schiller's Jungfrau von Orleans, German composition and conversation, German literature. In the Junior and Senior years an opportunity is offered whereby the student may elect further courses in classic and scientific literature, or special drill in French or German conversation.

## MATHEMATICS AND ASTRONOMY.

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The two terms of the Freshman year are devoted, one to Trigonometry—plane and spherical, and the other to advanced Algebra. The topics under the latter head, which receive special attention are Series (including the Binomial Formula), Logarithms, and Numerical Higher Equations. In the Sophomore year the Conic Sections are studied by the method of Analytical Geometry. This completes the required course in pure mathematics. The Calculus is an optional study of the Junior year, and applications to mathematical physics or astronomy may be made in the Senior year, if the student so elect. Astronomy is a required study in one term of the latter year, and Professor Young's General Astronomy is used as a text-book.

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## PHYSICS.

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A course in Physics, extending through one year, is required of all regular members of the Junior class. The aim always kept in view is not only to give students a theoretical knowledge of the subject, but also to offer them facilities for laboratory work and acquiring skill in experimentation. A mere book-knowledge of Physics is hardly worth the time and energy spent in its acquisition.

The course will embrace Sound, Light, and Electricity. It does not include a systematic study of Heat, but this subject will be repeatedly touched upon in the study of the other three subjects. As guides to laboratory work, Glazebrook and Shaw's Practical Physics and Chute's Practical Physics will be used. In the class-room, Glazebrook's Physical Optics and S. P. Thompson's Lessons in Electricity and Magnetism will be studied. The latter work will be supplemented by lectures on recent advances in theoretical electricity, and



on the practical application of physical principles. The telegraph, telephone, electric light and electric railway will receive due attention.

In the Senior year a more advanced course in electricity is offered as an elective. The course for the coming year will be on the Mathematical Theory of Electricity. Students electing it must have had a course in the Differential and Integral Calculus.

The list of scientific journals, partly or wholly devoted to Physics, to which students have access, will be found on page 42. Of these, *The London, Edinburgh and Dublin Philosophical Magazine*, *Wiedemann's Annalen*, and the *Journal de Physique Theorique et Appliquee* are, respectively, the leading physical journals of England, Germany, and France.

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## CHEMISTRY.

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(1.) Instruction is given by lectures, illustrated with numerous experiments, and by recitations, which include chemical manipulation and experiment by the students. The repetition of the class experiments and the trial of other and pertinent reactions and processes, under the supervision of the instructor, form an essential feature of the plan of instruction. The lectures are supplemented by a prescribed course of reading in Chemical Technology and Sanitary Science.

(2.) The design of the course is to give the student a general knowledge of chemistry, to inculcate habits of close observation, and to accustom him to scientifically accurate methods of experiment and inquiry. It aims to teach the principles and the practical use of chemistry rather than to burden his memory with a multiplicity of details. It seeks to stimulate the student to constantly apply his knowledge of chemistry in explanation of the phenomena of daily life.

By numerous examples, it shows him how to obtain from books the details familiar only to the professional chemist. Especial attention is given to Applied Chemistry; the subject is also so presented as to form a basis for the study of Biology, Sanitary Science, and Geology.

(3.) Pneumatic Chemistry (inorganic) is treated at the beginning of the course and the student familiarized with the generation and manipulation of gases. The elementary principles of the science are outlined, and chemical notation is constantly used. With the discussion of the non-metallic elements, many topics of sanitary importance are brought into prominence, *e. g.*, the atmosphere and ventilation, fuel and heating, the examination of potable water, etc., etc. The metals are briefly treated in respect to their chemical combinations, but somewhat more fully in their metallurgy and their application to the arts. The writing of chemical formulæ, in explanation of reactions, is brought prominently forward in this part of the course. A short time is next devoted to the explanation and practice of inorganic qualitative analysis. This in turn is followed by a few typical examples of quantitative analysis. In the presentation of Organic Chemistry the same plan of instruction is continued as far as practicable. The laws of chemical combination are more fully elaborated. Certain groups of substances are selected to typically represent the vast body of organic compounds. The selection of groups and of particular substances and processes for discussion, is governed very largely by economic and practical considerations.

(4.) In the advanced (elective) work, theoretical chemistry is more fully treated, and more elaborate experiments are arranged to confirm and illustrate the general laws. Qualitative and Quantitative Analysis and Assaying are systematically and practically studied in the laboratories. The analytical work is more fully described (page 39) under the heading Special Winter Courses. Original work in particular lines is pursued under the direction of the professor in charge.

## GEOLOGY.

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The study of Geology is taken up by students of the Ph. B. course, in the Sophomore year, and by those of the A. B. course, as an elective, in the Senior year. The topics, Physical Geography, Biology, and Minerology, which are noted on the schedule as separate studies, form with Geology a connected series and constitute a distinct branch of instruction in the curriculum.

The lectures and recitations are supplemented by field work and excursions to points of geological interest in the vicinity of the College. An important consideration in laying out the course in Geology has been the desire to inculcate the habit of close and accurate observation, and of logical and practical deduction from the phenomena brought to notice. It is sought to show the history of the Earth and the development of its flora and fauna from the evidences presented in the rocks themselves. The theories of evolution and development receive attention in connection with the work in Palæontology. The treatment of Economic Geology is made relatively full, because of the proximity of mining and metallurgical operations.

The study of Geology is peculiarly attractive and practical in this section of the State. In few localities can be found exposures of so many and varied strata of different geological ages. The region about Pike's Peak is particularly rich in the number and excellence of both rare and common minerals produced. Fossils are abundant at many points, and the older and later rock formations are often found in close proximity. The work of the course includes the practical study of Lithology with the preparation of rock-sections on the lithological lathe. The lithological microscope opens to the student the most modern lines of investigation into the nature of rocks.

The character of the region about the College is well adapted to illustrate Dynamical Geology. Faults, veins,



dikes, water erosion, sand-carving and glacial action can be found near at hand. A good selection of lantern slides enables the instructor to add to the natural illustrations of the surrounding district the evidences collected from many other favored localities.

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## BIOLOGY.

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It is hoped that a specialist may be secured for this department early in the year.

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## HISTORY.

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History will be taught in such a way that the student will be enabled to see the large movement of events as they affect the political, social, and ethical problems of human life; and the effort will be made to produce in the pupils that philosophical habit of mind that makes it possible for them so to weigh human affairs that they can deduce broad and clear conclusions from them. English History, both political and constitutional, and American Constitutional History, are studied during the Junior year. Modern History occupies the whole of the Senior year, and a brief course in Outlines of General History will be also offered.

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## POLITICAL AND SOCIAL SCIENCE.

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In Political Economy a thorough knowledge is given of the principles inculcated by the so-called "orthodox" economists—especially Mill and Cairnes; such knowledge being deemed essential to further progress in the department. An

important feature of the work will be the original solution of problems by the student. Unsettled problems will be discussed at length in the class-room. In addition to the preceding, select chapters from Fawcett, Jevons, and Cossa will be studied, and a series of lectures upon the History of Political Economy will be given. In general, the subjects considered will be so treated as to form a broad basis from which, as a starting-point, the student may pass on to intelligent original research into the economic and social problems confronting the thought of to-day.

The course in Social Science will consist largely of lectures, in which the leading social questions of the day will be considered. Frequent discussions and examinations will be held, however.

*THE CUTLER ACADEMY.*



## THE CUTLER ACADEMY.

This fitting-school, named in honor of one of the most generous and steadfast friends of Colorado College, (Henry Cutler, of Massachusetts,) provides a thorough preparation either for our own or any college in the United States. While the preparatory training is the principal aim, the plan of study is so arranged as to meet the requirement of students who do not propose going on into college work. The course is a thorough one, embracing four years, and the teaching is carefully conducted by experienced instructors, most of them the same who are employed in the college. Correspondence concerning The Cutler Academy should be addressed to the Assistant Principal, Mr. George L. Hendrickson.

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## FACULTY.

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WILLIAM FREDERICK SLOCUM, JR., *Principal.*

GEORGE LINCOLN HENDRICKSON, *Assistant Principal.*

FLORIAN CAJORI.

ELIZABETH WEBSTER EATON.

JESSE MARTIN ROBERTS.

WINTHROP DUDLEY SHELDON.

ELOISE WICKARD.

## REQUIREMENTS FOR ADMISSION.

Candidates for admission to the Cutler Academy are expected to have finished the eighth grammar grade in the public schools, or otherwise to have pursued a similar course, and at the discretion of the Faculty certificates for this work may be received. The examinations for entrance cover the subjects of Arithmetic, English Grammar, Spelling, and Geography, none of which are included in the courses of the Academy.

## COURSES OF STUDY.

The figures after each subject indicate the number of recitations per week.

### CLASSICAL COURSE.

#### *First Year.*

Latin .....	5
English .....	5
Algebra .....	5

#### *Second Year.*

Greek .....	5
Latin .....	4
Mathematics .....	4
English .....	3

#### *Third Year.*

Greek .....	4
Latin .....	4
Mathematics .....	2
English .....	2
Physics .....	4

#### *Fourth Year.*

Greek .....	4
Latin .....	3
French or German .....	4
Mathematics .....	3
English .....	2

### LATIN-SCIENTIFIC COURSE.

#### *First Year.*

Latin .....	5
English .....	5
Algebra .....	5

#### *Second Year.*

Physiology and Hygiene; } .....	5
Botany, }	
Latin .....	4
Mathematics .....	4
English .....	3

#### *Third Year.*

American History; } .....	4
Physical Geography, }	
Latin .....	4
Mathematics .....	2
English .....	2
Physics .....	4

#### *Fourth Year.*

Chemistry .....	4
Latin .....	3
French or German .....	4
Mathematics .....	3
English .....	2

## GREEK.

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The preparatory work in Greek begins with the second year and continues throughout the remaining three, with five recitations per week for the beginners, and four during the last two years. The following is the scheme of study:

*First Year.*—Hadley-Allen's Grammar, and Harper and Waters' Inductive Greek Method.

*Second Year.*—Kelsey's Anabasis of Xenophon, four books; review of the grammar; Allinson's Greek Prose Composition, once a week throughout the year.

*Third Year.*—Seymour's Iliad of Homer, three books; prose composition continued through first half-year, once a week; Pennell's History of Greece, once a week during the last half-year.

Occasional passages from the authors read are assigned for careful written rendering, and the student is required to use simple, idiomatic English in his daily translations.

Special pains is taken to ground the student thoroughly in the forms and usages of the language, and, therefore, systematic drill in these constitutes the main feature of the work. At the same time it is regarded of prime importance to cultivate in the student, from the start, a living interest in the language and literature. With this end in view, there has been arranged a series of readings in English, extending throughout the course and adapted to the age and requirements of the pupils.

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## LATIN.

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The preparatory course in Latin extends over a period of four years, the first of which for the next Academic year will be devoted to Collar and Daniells' Beginner's Latin Book, and selections from Nepos. In the second year, Nepos will be

continued with the second and fourth books of Cæsar's Gallic War, and several orations of Cicero will also be read. In the third year, Cicero will be continued and the Catiline of Sallust will be read, while the latter part of the year will be devoted to Vergil. In the fourth year, Vergil is continued, and for the coming year some of the simpler letters of Cicero will be studied. One hour per week of this year is devoted to a brief historical sketch of the Roman Republic. No special recitations are given to Latin writing, for it is believed that this subject can be pursued with more pleasure and better results in connection with the daily readings from classical authors. For the aims and methods of study in this department, see further page 18.

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## ENGLISH.

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This course is designed to prepare students for the college course, and the four years' work leads up systematically to the plan for the Freshman year. In the first year, Meiklejohn's English Language, Part I, is made the basis of work. Selections from Irving and Scott are read in class, while private readings are assigned to each student, written reports of which are required from time to time. The second year is mainly devoted to the study of word-building and derivation, in which the above-mentioned work of Meiklejohn serves as a guide. Much attention is given in this year to composition and to selections from Swinton's Studies in English Literature. In the third year, composition is continued, with the use of Part II of Meiklejohn, and the history of the English language, as set forth in Part III of the same work, is traced. A course of supplementary readings is also required. In the fourth year, Welsh's Rhetoric is made the basis for further study and practice in composition. Selections from Lowell, Tennyson and Goldsmith are studied, and two plays of Shakespeare are required.



## FRENCH AND GERMAN.

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Either French or German, as the student may choose, is begun in the fourth year of the Academy. The course of study is as follows :

*In French*—Otto's French Grammar (Part I), French prose, composition and conversation.

*In German*—Comfort's First Book in German, Otto's Grammar, Bernhardt's Sprach- und Lesebuch, easy German prose.

For aims and methods of study in this department, see page 20.

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## MATHEMATICS.

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The Mathematical course in the Academy comprises two branches, Algebra and Geometry, as the student is expected to have completed Arithmetic before applying for admission. Wentworth's Complete Algebra and New Elementary Geometry are the text-books used.

In the first year, Algebra is begun, and is carried as far as the subject of Quadratic Equations. In the second, Plane Geometry is studied, and the pupil, besides learning the proofs of demonstrated theorems, obtains exercise in inventing proofs for himself. In the third year, the Algebra is resumed, and the whole subject of quadratic equations and related topics is studied, leaving to the fourth year the completion of Elementary Geometry, in the books treating of the plane and solids. The aim of the instruction in these four years is a thorough preparation for college work, by means of familiarity with the ground principles and correct habits of mathematical thought.

PHYSICS.

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Elementary Physics is taught to students in the third year of the preparatory course. The subject is approached by the inductive method. Great stress is laid upon laboratory practice, which constantly accompanies the text-book work. The apparatus for this course is ample, and students are made to perform nearly all experiments themselves. It is found that this objective method makes the subject more interesting to the pupil, gives him more valuable training, and impresses physical facts more deeply and lastingly upon his mind. The text book used is Gage's Elements of Physics. Chute's Practical Physics serves as a guide in the laboratory.

*CIRCULAR of INFORMATION.*



## LOCATION.

The City of Colorado Springs is admirably adapted for a college town. At its very foundation, plans were wisely laid, and the succeeding growth has maintained a most healthy character of morality and culture, to which has been added the element of wealth, increasing, since the construction of radiating railroad systems, at a brisk though not an abnormal rate. The result is a prosperous, wide-awake town, from which saloons and all attendant destructive influences are absent, having a population drawn from every section of the Union, as well as from England, and in a slight degree from other foreign countries; but, whether native or foreign, composed almost wholly of the better class of settlers; a town at present of about ten thousand inhabitants, but with all the conveniences of a larger city—water-works, sewers, electric lights, mail delivery, telephone communication north, south, and west; a street railway, besides an electric line under construction. It is a noted health-resort, but has nothing of the air of a hospital. But while it possesses the attractions of a city, the lover of nature may seek far for a spot more favored. The mountains are close at hand, and their serrated line occupies about a third of the horizon. In their center stands Pike's Peak, a name familiar everywhere, to whose summit henceforth the traveler may ascend by carriage or railway-car, or by romantic bridle paths, remote from the thronged lines of summer travel. The climate has obtained a world-wide reputation. Its curative qualities consist largely in the opportunity for out-door exercise, afforded by the great number of fine days, to which the dryness and rarity of the air adds a quality exhilarating to all, and regarded as a specific in cases of malarial disease, asthma, and incipient phthisis. Students unable to work in other climates may here continue their studies, while at the same time making a permanent gain in health. This plan has been successfully carried out in a number of instances.

Taking all considerations together, the words of a recent number of the *Colorado School Journal* appear but reasonable:

"No point in our State ever combined as many advantages for the establishment, growth and greatness of a college as does Colorado Springs. It is manifestly the point about which scholars and students, men and women of culture, wealth, and leisure will reasonably gather."

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## SPECIAL STUDENTS.

Special students will be received, at the discretion of the Faculty, into such classes as they are qualified to enter.

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## SPECIAL WINTER COURSES.

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These courses are open to all students who have sufficient maturity to pursue them to advantage. No regular hours of laboratory work are required of these students, excepting such times as may be appointed by the professors in charge for lectures, conferences, and special instruction; but it is expected that each one will apply himself diligently and without oversight to his work, occupying therein such time as will enable him to complete the full measure of the course pursued. No student will be allowed to take his examination for a certificate unless the full work of the course has been completed.

The experience of past years has shown that many persons driven from the mining regions by the snows of winter, find themselves then at liberty to take up some scientific work which will be helpful in the succeeding season. The College offers the following Special Courses:

### (1.) BLOWPIPING WITH DETERMINATIVE MINERALOGY.

The instruction in this course includes: Use of the blowpipe; detection of the various elements; determination

of common minerals; blowpipe assay of ores of gold, silver, copper, lead, etc. To miners, prospectors, and collectors of minerals, the blowpipe affords a ready means of determining specimens, and of ascertaining with rapidity and approximate accuracy the value of any sample of ore. The knowledge thus given, and the saving of time and means, may often be of great service in remote places.

### (2.) ASSAYING.

It is the purpose of the College to make this course cover all the best methods in use, and no student will be graduated from it until fully competent to correctly assay every description of ore. Those who take the course are required to become familiar with both the theory and practical execution of fire assays of ores of gold, silver, lead, copper, antimony, tin, zinc, nickel, cobalt, bismuth, iron, mercury, platinum, coal, and the testing of gold, silver, and base bullion; and in addition, to learn the commercial methods of humid assay for copper, zinc, iron, silica, lime, manganese, etc. The methods of sampling ore in large and small lots are also included in the course. The time usually occupied in this course is from four to six months, but the student may take his examination as soon as the required work is done.

### (3.) QUALITATIVE CHEMICAL ANALYSIS.

It is desired that students who take this course shall have completed an elementary course in General Chemistry. Those who are lacking in this respect will be obliged to enter the college class in this study. The work of the course comprises experimental drill in obtaining characteristic reactions of the more common elements, study of empirical formulæ and symbolic expression of reactions, solution of substances, separation of groups of elements, analysis—first of simple salts and finally of complex mixtures. By special arrangement students may also take up toxicological analysis and analysis of commercial organic bodies.

### (4.) QUANTITATIVE CHEMICAL ANALYSIS.

The course in Quantitative Analysis presupposes a knowledge of General Chemistry and qualitative analysis. In



it are included stoichiometry and determinations of single substances by approved methods; alloys, minerals, ores, slags and mineral-waters are among the substances comprising the list required to be analyzed by the student. The character and number of substances analyzed will be varied from time to time, as occasion may arise. A prominent feature of the course will be the short or commercial method of analysis given as a concluding work.

---

#### DEPOSITS.

Deposits are required from students in these courses to cover the costs of supplies used and breakage of apparatus, payable in advance, as follows :

Assaying, \$50; Qualitative Chemical Analysis, \$20; Quantitative Chemical Analysis, \$20; Blowpiping and Determinative Mineralogy, \$25. Unexpended balances are returned to students at the close of the term.

These deposits are not expected to fully cover the cost of supplies to the average student. In order that they may be as little burdensome as possible, they are placed at a figure as low as will suffice for a very careful and prudent person only.

The department reserves the right to call for an extra deposit whenever the student exceeds the limit of his accredited balance.

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#### DEGREES AND HONORS AT GRADUATION.

The College offers two degrees, those of Bachelor of Arts and Bachelor of Philosophy. These are intended to be of equal value, representing the same number of years of work. The degree of A. B., as will be seen by examination of the course of study, represents a proficiency in the "humanities" not inferior to that for which the same degree is given in the best-known institutions of our country, while suitable recognition is made of the claims of the physical sciences. For

the degree of Ph. B. a more extended study of these sciences is required, as well as some additional work in modern languages, while the study of Greek is omitted.

Special honorary mention is made at graduation of students who have shown particular merit in the work of any one or more of the principal departments of instruction.

Suitable certificates are awarded, on examination, at the completion of the special technical courses.

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### LIBRARY.

The library now embraces about seven thousand volumes and upward of a thousand pamphlets. All the government publications of the United States are regularly received, as issued. The Strettell collection, the gift of Arthur E. V. Strettell, contains a large number of standard literary works in French, besides other valuable books. Over a hundred volumes and pamphlets, relating to the civil war and slavery in the United States, were received as the bequest of Mrs. V. Pierson. The recent gift of about three hundred volumes, all of them good books, presented by Mr. George H. Putnam, also deserves especial mention. An exceedingly valuable accession is that very recently received from Mr. J. J. Hagerman, of Colorado Springs, consisting of the London edition (Valpy, 1820-30,) of the Delphin classics. It is believed that there are not in America more than three or four sets of this work, which embraces the text of the classic Latin authors, with all the notes and emendations of the best critics up to the date of publication. The library is also well supplied with the leading American and European periodicals bearing on the work of the various departments.

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### READING ROOMS.

In connection with the library is a reading room for the use of students and friends of the College, where the current magazines of literature and popular science, as well as a

number of leading newspapers, may be consulted. The Young Men's Christian Association of the College has also a similar room. Following is a list of the more popular journals secured :

The Nineteenth Century,  
The Fortnightly Review,  
The Forum,  
The North American Review,  
The Century,  
Scribner's Magazine,  
Harper's Monthly,  
The Atlantic,  
The Popular Science Monthly,  
The Book Buyer,  
The Nation,  
The Critic,  
Die Nation (Berlin),  
Harper's Weekly,  
The New England Journal of Education,

The Christian Union,  
The Independent,  
The Advance,  
The London Graphic,  
Ueber Land und Meer (Stuttgart),  
La Figaro (Paris),  
Puck,  
Judge,  
The Chicago Inter-Ocean,  
The National Tribune,  
The Denver Times,  
The Denver Republican,  
Colorado Springs Gazette,  
Colorado Springs Republic,  
Pike's Peak Herald.

The following journals, of a more technical character are also secured :

The Scientific American,  
Nature,  
Science,  
The London, Edinburgh and Dublin Philosophical Magazine,  
Wiedemann's Annalen der Physik und Chemie (Leipzig),  
Journal de Physique Theorique et Appliquee (Paris),  
The Electrical Engineer,  
The American Journal of Philology,  
The Journal of Philology (London),  
The Classical Review (London),  
Bursian-Mueller's Jahresbericht ueber die Fortschritte der klassischen Altertumswissenschaft (Berlin),  
Woelfflin's Archiv fuer Lateinische Lexicographie und Grammatik (Leipzig),  
Berliner Philologische Wochenschrift,  
Shakespeariana.

---

## LABORATORIES AND APPARATUS.

The laboratories of the College supply, to an unusual degree, the means for thorough and practical training in the

scientific branches of the curriculum. The importance of the metallurgical interests of this section of the country has prompted the College to provide appliances and apparatus in its laboratories for special work in this direction. Students who pursue these special courses can here be fitted by practical work to take positions in the laboratories of mints, smelters, mining companies, assay offices and chemical works. All needful supplies of tools, glassware, chemicals and sundries, are furnished at cost from the store-room; and such articles (excepting chemicals) as may be suitable for re-issue are again received (at a small discount) when the student has completed his course..

The chemical laboratory is furnished with tables, desks, hood, city-water, condenser for distilled water, blast-lamp, balances and all apparatus needful for accurate and practical work. Each student is assigned to a separate desk, where he may pursue his work without interruption, and in which he may keep his apparatus under his own lock and key. Connected with this laboratory is a dark room well fitted out for photographic work.

Instruction in blowpiping and determinative mineralogy is conducted at side tables, which are provided with compartments under lock and key for the safe keeping of all blowpipe supplies. Each student is assigned to a position at the table and provided with a separate compartment. Complete apparatus peculiar to this study is kept in stock, and is sold to students at cost. Blowpipe apparatus once used cannot be returned to the store-room.

The assay-laboratory and the furnace-room are completely equipped for every description of practical assaying. A private desk, crucible and cupelling furnaces, tools, ore-balance and bins for wood and coke are assigned to each student. The crushers, sampling and grinding apparatus, fine bullion-balances, rolls, roasting furnaces, large melting furnaces, etc., are used in common by all students. The reagents and supplies drawn from the store-room are kept by each man on his own desk, so that he may work without disturbance from his fellow-students.

The apparatus for the illustration of Physics and Mechanics is in some directions very good, and is being increased as rapidly as possible where the need is felt. A fine stereopticon, operated with the calcium light, is used by all departments of the College in presenting those topics which are suitable for pictorial illustration. About five hundred selected photographic views, covering many subjects, are now in the possession of the College. The Herbarium is made up in greater part of a classified and mounted collection of pressed Colorado flora. Several microscopes and some other apparatus help the students in pursuing the studies of Botany and Natural History. The cabinets are well supplied with specimens illustrative of mineralogy and lithology. A lathe for cutting rock-sections, and a large collection of classified rock-section slides, to be used with the fine lithological microscope, open the way to the most modern research in this direction.

A fine set of surveying instruments—transit, plane-table, sextant, leveling rods, stadia rods, steel tapes, etc.—enables the classes in surveying and engineering to gain important practical experience in this department.

---

### METEOROLOGICAL OBSERVATORY.

A set of self-registering instruments, valued at \$350, has been put in charge of the Professor of Mathematics. These instruments are of the pattern devised by Dr. Daniel Draper for the automatic continuous register of pressure, shade-temperature, and radiation. A similar continuous register of the wind's direction and velocity is also kept, while during the past year a Richard thermograph and barograph have been in operation, thus affording means of comparison and correction for the Draper instruments.

These instruments are mostly in Hagerman Hall, at the office of the Director (Prof. F. H. Loud) of the Colorado Weather Service, which was established by an act of the recent Legislature to continue the work begun by the Colo-



rado Meteorological Association, and carried on for some years past at the College with the co-operation of the United States Signal Service. In the work of the Weather Service, which consists in the collection and publication of meteorological data over the whole State, the Director is associated with the local officer of the Signal Service, whose office is in the new National Bank Building.

---

### HAGERMAN HALL.

This building is a substantial stone structure, warmed with steam, and has bath-rooms, reading and reception rooms. There is also a laundry in connection with the house, and a dining-room that accommodates one hundred and fifty students. Those rooming out of the building can secure meals here at low rates.

It is the purpose of the trustees to make this building, as nearly as possible, *a home* for students and such instructors as desire to make it their residence while connected with the College.

---

### PHYSICAL TRAINING, EXERCISE AND ATHLETIC SPORTS.

All students, unless excused, are required to take a light calisthenic exercise.

A volunteer military company has been formed by the students themselves, and meets several times a week for drill.

Encouragement is given to a wise amount of interest in athletic sports, and the College campus affords ample room for the usual college games.

The opportunities for walks and all out-of-door exercise are unusually fine during all the year.

---

### MUSIC.

It is hoped that arrangements will be made for the opening of a Musical Department at an early date. In the

meantime, special rates may be obtained for College students from some of the excellent teachers in the city.

## PUBLIC LECTURES.

The annual course of afternoon lectures at the College was given on successive Friday afternoons. The first series consisted of eight lectures on "The Æsthetics of Music," by Mr. Benjamin Ives Gilman, the subjects being as follows :

- |           |            |           |                |
|-----------|------------|-----------|----------------|
| 1. Tone.  | 3. Modes.  | 5. Key.   | 7. Form.       |
| 2. Notes. | 4. Chords. | 6. Style. | 8. Expression. |

These were followed by Rev. James B. Gregg's lecture on Lowell.

The second series was given by Mr. E. C. F. Krauss, as follows :

- |                             |                          |
|-----------------------------|--------------------------|
| 1. Lessing.                 | 3. Jean Paul F. Richter. |
| 2. Schiller's Early Dramas. | 4. The Legend of Faust.  |

The third series was by Dr. S. E. Solly, on "Human Life : its Use and Preservation."

- |   |                              |
|---|------------------------------|
| 1. Origin and Evolution.                    | 4. Heating and Circulation.  |
| 2. The Human Body: its General Composition. | 5. Sensation and Regulation. |
| 3. Supply and Waste.                        | 6. Life's Epitome.           |

All students connected with the College are admitted to these lectures free of charge.

## STUDENTS' SOCIETIES.

Associations, both of young men and young women, have been organized in the College, in affiliation with the College Christian Associations of the country, and are useful in promoting the fellowship of students in ways that harmonize with Christian aspiration and effort. A reading-room is supported by the young men's association, lectures are given from time to time by various speakers, and religious meetings are held.

The literary society of the College is open to all the students and furnishes opportunity for independent work and drill in public debate and parliamentary practice.



## PRIZE SPEAKING.

On the last Tuesday in May there will be a prize rhetorical exhibition; in this twelve contestants take part, who have been chosen from a preliminary contest shared by all the members of the College.

---

## PECUNIARY AID.

### SCHOLARSHIPS.

The income of the following scholarships is devoted to the aid of worthy students who may need assistance in completing their course:

The Rice Scholarship of \$700, established by the friends of the Rev. Charles B. Rice, of Danvers, Massachusetts.

The Currier Scholarship of \$1,000, founded by Hon. Warren Currier, of St. Louis.

During the past year the Rev. J. S. Black gave \$40, and the Winter Street Congregational Church, of Bath, Maine, \$35 to pay the tuition of two young men.

---

## SELF-SUPPORT.

During the past year a number of students have been able to pay their way, wholly or in part, by work secured in various homes in the city. Applications for persons to do this work have come to the President in sufficient numbers to provide for all cases.

---

## COLLEGE BILLS.

The term bills are issued September 24, and February 12, and are payable immediately, unless special arrangements are made with the President.

Students leaving before the end of the term pay full tuition, except under very unusual circumstances.

## EXPENSES.

Tuition, per year.....	\$35 00
Matriculation fee.....	5 00
Library fee.....	3 00
Table board, in the College club-house, per week.....	4 00
Rooms, warmed and furnished, per week, from..	\$1 00 to 2 00
Towels, bed-linen and blankets must be provided by the students.	
Tuition for the Course in Assaying .....	\$25 00
Tuition for other special Winter Courses, each.....	15 00

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### THE WOMAN'S EDUCATIONAL SOCIETY OF COLORADO COLLEGE.

Was formed in April, 1889, by the ladies of Colorado Springs. The purpose of the society is "to give physical, intellectual, and spiritual aid to young women who are students in any department of Colorado College." It has now over one hundred members. The membership fees go to form a beneficiary fund, from which loans are to be made on the following conditions.

1st. Loans may be made to girls who have been in the College one term and are recommended by the Faculty as in every way deserving of such aid.

2d. No student shall be allowed to incur an indebtedness to the Society of more than \$300.

3d. Students may receive loans without interest until their connection with the College ceases; after which their notes are to draw interest at four per cent.

This Society has also undertaken to raise funds for a girls' hall, which is to be on the College grounds. Over \$4,000 is now in hand for this purpose.

This building is needed greatly for the next academic year, and the increasing interest shown in it leads the Society to believe that sufficient funds for its erection will soon be forthcoming.

ANNUAL BULLETIN

OF

COLORADO COLLEGE,

AND

CUTLER ACADEMY.

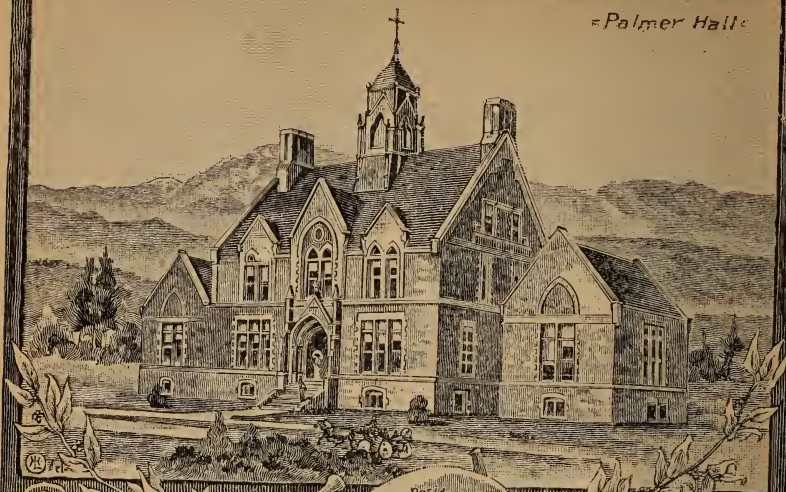
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*Published by the Corps of Instruction, with the approval of the  
Board of Trustees.*

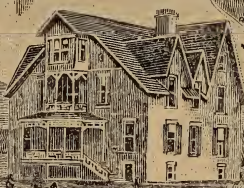
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COLORADO SPRINGS, APRIL 15, 1891.

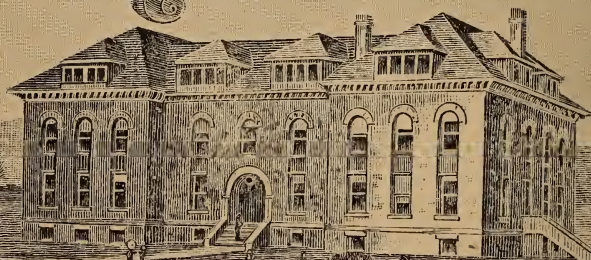
Palmer Hall



Drost's Residence



Hagerman Hall



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## ANNOUNCEMENT.

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In issuing the Bulletin for this year, attention is especially called to the increased facilities for study and for the accommodation of students which Colorado College offers. Important additions have been made to the Faculty, and now almost every department of collegiate instruction is represented by a thoroughly-trained specialist. Montgomery Hall, a handsome stone building, has been erected during the past year, and will afford superior accommodations for young ladies from abroad. A gymnasium is in course of construction. In respect to such aids to study as collections, library, and scientific instruments, important accessions (especially of the last class) have been made during the year. The attendance for the past year has been the largest in the history of the institution. Attention is called to the Cutler Academy, the associated preparatory school, in which students are prepared for any American institution of collegiate grade.



## TRUSTEES OF THE COLLEGE.

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WILLIAM F. SLOCUM, JR.,  
*President of the Board.*

DR. B. F. D. ADAMS.

GEO. W. BAILEY.

JOHN CAMPBELL.

SAMUEL CROOKS.

JOHN CURR.

HENRY CUTLER.

GEORGE DE LA VERGNE.

JAMES M. GORDON.

REV. JAMES B. GREGG.

J. J. HAGERMAN.

IRVING HOWBERT.

WILLIAM S. JACKSON.

F. L. MARTIN.

REV. RICHARD MONTAGUE.

GEORGE H. PARSONS.

REV. CHARLES B. RICE.

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## EXECUTIVE COMMITTEE.

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J. J. HAGERMAN, *Chairman.*

GEORGE H. PARSONS, *Secretary.*

JOHN CURR.

WILLIAM S. JACKSON.

WILLIAM F. SLOCUM, JR.

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J. H. BARLOW, *Treasurer of the College.*

## FACULTY.

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WILLIAM FREDERICK SLOCUM, JR., B. A. (Amherst),  
*President and Professor of Philosophy.*

FRANK HERBERT LOUD,\* B. A. (Amherst),  
*Professor of Mathematics and Astronomy.*

WILLIAM STRIEBY, M. A. (University of the City of New York),  
E. M. (Columbia College School of Mines),  
*Professor of Chemistry and Metallurgy.*

REV. GEORGE NATHANIEL MARDEN,  
*Professor of History.*

ELOISE WICKARD,† B. A. (Oxford Female College),  
*Professor of English.*

GEORGE LINCOLN HENDRICKSON, B. A. (Johns Hopkins Univ.),  
*Professor of Latin.*

FLORIAN CAJORI, M. S. (Univ. of Wisconsin),  
*Professor of Physics.*

SYLVESTER PRIMER, B. A. (Harvard), Ph. D. (Univ. of Strassburg),  
*Professor of Modern Languages.*

AUGUSTUS T. MURRAY,‡ B. A. (Haverford College),  
Ph. D. (Johns Hopkins University),  
*Professor of Greek.*

WILLIAM MONTAGUE HALL, B. A. (Yale),  
*Professor of Political and Social Science.*

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\* Absent on leave during the past year. Fellow of the Clark University, Worcester, Massachusetts.

† Absent on leave during the past year, in Europe.

‡ At present pursuing philological studies in Germany. Will assume charge of the department at the beginning of the next Academic year.

HERBERT WILLIAM MAGOUN, B. A. (Iowa College),  
Ph. D. (Johns Hopkins University),  
*Acting Professor of Greek.*

FREDERIC A. CHAPMAN, LL. B.,  
*Acting Professor of Oratory and Parliamentary Debate.*

MARTHA ROBERTS MANN, B. S. (Wellesley College),  
*Instructor in Biology.*

BENJAMIN EDWARD CARTER, JR., B. A. (Harvard),  
*Instructor in Mathematics.*

HATTIE ELIZABETH GUY,  
*Instructor in English.*

DOUGLAS CARNEGIE, M. A. (Cambridge, Eng.),  
*Instructor in Chemistry.*

AUGUSTUS G. UPTON, M. A. (Oberlin College),  
*Librarian.*

WILLIAM HENRY LAMB,  
*Assistant in the Chemical Laboratory.*



*COLORADO COLLEGE.*

## CALENDAR.

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1891.

- June 9.....Tuesday.....First entrance examinations.  
Sept. 22.....Tuesday.....Second entrance examinations.  
Sept. 23.....Wednesday.....First half-year begins at 8:30 A. M.  
Nov. 26.....Thursday..... }  
Nov. 27.....Friday..... } The Thanksgiving recess.  
Dec. 23.....Wednesday.....Christmas recess begins at 1 P. M.
- 

1892.

- Jan. 4.....Tuesday.....Christmas recess ends at 8:30 A. M.  
Jan. 28.....Thursday.....Day of prayer for Colleges.  
Feb. 5.....Friday.....First semi-annual examinations begin.  
Feb. 10.....Wednesday.....First half-year ends.  
Feb. 11.....Thursday.....Second half-year begins at 8:30 A. M.  
Feb. 22.....Monday.....Washington's birthday.  
Apr. 14.....Thursday.....Easter recess begins at 1 P. M.  
Apr. 18.....Tuesday.....Easter recess ends at 8:30 A. M.  
June 7.....Tuesday..... }  
June 7.....Tuesday..... } Second semi-annual examinations begin.  
June 7.....Tuesday..... } First entrance examinations.  
June 12.....Sunday.....Baccalaureate sermon.  
June 13.....Monday.....College oratorical contest.  
June 15.....Wednesday.....Commencement exercises.  
Sept. 20.....Tuesday.....Second entrance examinations.

# REQUIREMENTS FOR ADMISSION

TO THE

## FRESHMAN CLASS.\*

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS.

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1. IN ENGLISH.—The candidate will be required to write a short English composition,—correct in spelling, punctuation, grammar, division by paragraphs, and expression,—upon one of several subjects announced at the time of the examination. In 1891, the subjects will be drawn from one or more of the following works: Shakespeare's Julius Cæsar and Merchant of Venice, Coleridge's Ancient Mariner, Longfellow's Evangeline, Macaulay's Essay on Lord Clive, Irving's Alhambra, Scott's Old Mortality, George Eliot's Silas Marner, Hawthorne's House of Seven Gables. Every candidate is expected to be familiar with *all* the books in this list.

The candidate will also be required to *correct specimens of bad English* set for him at the time of the examination.

The works prescribed for the examination of 1892, 1893, and 1894, are as follows:†—

*For 1892.*—Shakespeare's Julius Cæsar and As You Like It, Scott's Marmion, Longfellow's Courtship of Miles Standish, Addison's Sir Roger de Coverley Papers, Macaulay's second Essay on the Earl of Chatham, Webster's first

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\*These requirements have been modified to conform with the preparatory courses adopted by the Colorado State Teachers' Association. Any persons who have pursued either of those courses and have passed satisfactory examinations upon the same, will be received without condition. The courses, as adopted by the Association, may be secured by addressing the President of the College. They are reprinted also on page 60 of this Bulletin.

†These are the lists adopted by the Commission of Colleges in New England on Admission Examinations.

Bunker Hill Oration, Irving's *Alhambra*, Scott's *Talisman*, George Eliot's *Scenes from Clerical Life*, Hawthorne's *House of Seven Gables*.

*For 1893.*—Shakespeare's *Julius Cæsar* and *Twelfth Night*, Scott's *Marmion*, Longfellow's *Courtship of Miles Standish*, Addison's *Sir Roger de Coverley Papers*, Macaulay's second *Essay on the Earl of Chatham*, Emerson's *American Scholar*, Irving's *Sketch Book*, Scott's *Ivanhoe*, Dickens' *David Copperfield*.

*For 1894.*—Shakespeare's *Julius Cæsar* and *Merchant of Venice*, Scott's *Lady of the Lake*, Arnold's *Sohrab and Rustum*, the *Sir Roger de Coverly Papers* in the *Spectator*, Macaulay's second *Essay on the Earl of Chatham*, Emerson's *American Scholar*, Irving's *Sketch Book*, Scott's *Abbot*, Dickens' *David Copperfield*.

2. IN GREEK.—(a) A thorough knowledge of inflection, with the use of the accents, and the ordinary grammatical constructions. (b) Four books of the *Anabasis*, or three books and Cook's *Selections from the Cyropædia*. (c) Three books of the *Iliad*, with prosody and dialectic forms. (d) Translation at sight of average passages from Xenophon and Homer. (e) The translation into Greek of a passage of connected discourse of moderate difficulty. (The first forty-four exercises in Allinson's *Greek Prose Composition* will indicate the nature of the work required.) (f) Such a brief general view of Greek history as is contained in the revised edition of Pennell's *History*.

3. IN LATIN.—(a) An accurate knowledge of the forms and of the ordinary phenomena of the syntax of the language. (b) The translation at sight of average passages from Latin prose authors, and from the *Eclogues* or the *Æneid* of Virgil. (c) The translation into Latin of a passage of connected English narrative, which for the examination in 1891 will be based upon some portion of either the second book of Cæsar's *Gallic War*, or Nepos' lives of Miltiades and Themistocles. (d) An outline knowledge of the history of the Roman Republic.



4. IN MATHEMATICS.—(*a*) Algebra, through simultaneous quadratic equations. (*b*) Elementary plane Geometry, or as much as is contained in the first five books of Wentworth's Geometry (revised edition).

5. IN PHYSICS.—The elements of the subject as contained, for example, in Gage's Elements of Physics.

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF PHILOSOPHY.

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In English, Latin, and Physics, the same as for the course leading to the degree of Bachelor of Arts. Candidates for admission to this course need not offer Greek; in place of which they will be examined in the following subjects, in addition:

1. IN CHEMISTRY.—Roscoe's Elementary Lessons in Chemistry will serve to indicate the amount required.

2. IN BOTANY.—Gray's Lessons (revised edition.)

3. IN PHYSIOLOGY.—Martin's Briefer Course, or an equivalent.

4. IN AMERICAN HISTORY.—An outline knowledge of leading facts.

5. IN MATHEMATICS.—(*a*) Algebra, through simultaneous quadratic equations. (*b*) Elementary plane and solid Geometry, or as much as is contained in the first eight books of Wentworth's Geometry (revised edition).

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## ENTRANCE EXAMINATIONS.

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Examinations for admission to the College, and also to the Cutler Academy, will be held at the close of the Spring term (June 9, 1891, at 9 A. M.), and again at the beginning of the Fall term (September 22, 1891, at 9 A. M.). No examinations will be held between these dates, but delayed exami-

nations may be held after the beginning of the Fall term, for the accommodation of students who, for good reason, have been unable to attend at the regular time.

For the convenience of students residing at a distance, examinations will be held under the direction of authorized persons, at various points in and near the State, as need may require. The cities of Cheyenne, Wyo.; Denver, Pueblo, Trinidad, Leadville, Montrose, and Grand Junction, Colo.; and Las Vegas, N. M.; are points where such arrangements can readily be made, and others may be added if necessary. But students who desire examinations at these or other points should notify the President at least three weeks in advance of the time of the regular examination.

A prize of twenty-five dollars is offered for the best examination for admission to the Freshman class.

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## ADMISSION TO ADVANCED STANDING.

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Students will be received to advanced classes on examination in the studies of the preceding years. The Faculty may, at their discretion, receive certificates from other colleges or schools as evidence that the student has satisfactorily pursued these or equivalent studies.

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## COURSES OF STUDY.

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Two courses of study are offered in the College. One, leading to the degree of Bachelor of Arts, corresponds to the courses of the best Eastern colleges leading to the same degree. The other, leading to the degree of Bachelor of Philosophy, includes less Latin and no Greek, but is more complete in Natural Science and Modern Languages.

The following is a tabular view of the two courses of study, the figures after each subject indicating the number of recitations or lectures per week :

COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS.		COURSE LEADING TO THE DEGREE OF BACHELOR OF PHILOSOPHY.	
<i>Freshman Class.</i>		<i>Freshman Class.</i>	
Greek.....	4	Biology.....	4
Latin.....	4	Latin.....	4
Mathematics.....	3	Mathematics.....	3
German.....	4	French or German.....	4
English.....	2	English.....	2
<i>Sophomore Class.</i>		<i>Sophomore Class</i>	
Greek.....	3	Chemistry.....	4
Latin.....	3	Biology.....	3
Chemistry.....	4	French or German.....	4
Mathematics; Mechanics.....	4	Mathematics; Mechanics.....	4
English.....	2	English.....	2
<i>Junior Class.</i>		<i>Junior Class.</i>	
Physics.....	4	Physics.....	4
Psychology; Logic.....	3	Psychology; Logic.....	3
History.....	4	History.....	4
Political Economy.....	2	Political Economy.....	2
Elective.....	4	Elective.....	4
<i>Senior Class.</i>		<i>Senior Class.</i>	
History of Philosophy; Ethics..	4	History of Philosophy; Ethics..	4
Astronomy, (first half-year,)....	4	Astronomy, (first half-year,)....	4
Elective, (first half-year,).....	8	Elective, (first half-year,).....	8
Elective, (second half-year,)....	12	Elective, (second half-year,)....	12

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ELECTIVES.—OPEN TO JUNIORS.

Popular Government, (first half-year,).....	2
Political Economy, (second half-year,).....	3
European Governments, (second half-year,).....	2
English History, since 1702, (second half-year,).....	3
Roman History.....	2
Roman Law.....	1
Greek.....	2
German.....	2
French.....	2
Biology.....	3

Chemistry.....	4
Mineralogy.....	4
Calculus.....	2
English .....	2
Anglo-Saxon .....	2

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ELECTIVES.—OPEN TO SENIORS.

Political Economy, (first half-year,) .....	2
Popular Government, (first half-year,).....	2
Modern European History, (first half-year,) .....	3
Political Economy, (second half-year,).....	3
European Governments, (second half-year,)....	2
English History, since 1702, (second half-year,).....	3
American History, since 1812, (second half-year,) .....	4
Roman History.....	2
Roman Law.....	1
Greek.....	2
German.....	2
French.....	2
Biology .....	4
Physics .....	2
Chemistry, Qualitative and Quantitative Analysis.....	5
Geology .....	5
English .....	2
Anglo-Saxon .....	2



# PROGRAMME OF RECITATIONS.

		CHAPEL EXERCISES.				
8:30-9		Astronomy (Seniors). Psychology (Juniors). Sophomore Chemistry. Freshman Greek. Freshman Biology. 3d year Acad. Physics. 1st year Acad. Latin.	Psychology (Juniors). Sophomore French. Freshman English. 3d year Acad. Physics. 1st year Acad. Latin.	Astronomy (Seniors). Sophomore Chemistry. Freshman Greek. Freshman Biology. 1st year Acad. Latin.	Astronomy (Seniors). Psychology (Juniors). Sophomore Chemistry. Freshman Greek. Freshman Biology. 3d year Acad. Physics. 2d year Acad. English. 1st year Acad. Latin.	
9-10						
10-11		History (Juniors). Sophomore Mathematics. Freshman German. 2d year Acad. Latin. 1st year Acad. English.	Hist. of Philosophy (Sen.) Sophomore Mathematics. 3d year Acad. German. 3d year Acad. Greek. 2d year Acad. Latin. 1st year Acad. English.	Hist. of Philosophy (Sen.) History (Juniors). 3d year Acad. German. 3d year Acad. Greek. 2d year Acad. Latin. 1st year Acad. English.	Hist. of Philosophy (Sen.) History (Juniors). Sophomore Mathematics. 3d year Acad. German. 3d year Acad. Greek. 2d year Acad. Latin. 1st year Acad. English.	
11-12		Roman Law (Juniors). Sophomore English. Freshman Mathematics. 3d year Acad. Latin. 2d year Acad. Greek. 2d year Acad. Chemistry. 1st year Acad. Algebra.	Roman History (Juniors). Sophomore English. Freshman Mathematics. 3d year Acad. Latin. 2d year Acad. Greek. 2d year Acad. Chemistry. 1st year Acad. Algebra.	Roman History (Juniors). Sophomore French. Freshman English. 3d year Acad. Latin. 2d year Acad. Greek. 2d year Acad. Chemistry. 1st year Acad. Algebra.	Political Econ. (Juniors). Sophomore French. Freshman Latin. 3d year Acad. Latin. 2d year Acad. Greek. 2d year Acad. Chemistry. 1st year Acad. Algebra.	
12-1		Physics (Juniors). Sophomore Biology. Sophomore Greek. Freshman Latin. 3d year Acad. English. 2d yr. Acad. Mathematics.	Physics (Juniors). Sophomore Latin. Freshman German. 2d year Acad. English.	Sophomore Biology. Sophomore Greek. Freshman Latin. 3d year Acad. English. 2d yr. Acad. Mathematics.	Physics (Juniors). Sophomore Latin. Freshman German. 2d yr. Acad. Mathematics.	

The Programme of Elective Courses will be prepared after the opening of the year.

PHILOSOPHY.

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The work in this department commences the first of the Junior year and continues during the remainder of the College course.

It begins with a study of the human mind, and continues with the investigations in introspective psychology, based upon the facts of experience. The aim will be to gain clear conceptions of the powers, functions, and activities of the soul. Particular attention is given to the relation of mental phenomena to physiology, and to the extent to which modern experiments have traced the physical basis of the higher faculties.

During the last term of Junior year, the study of Logic will be undertaken, beginning with Jevons' "Elementary Lessons in Logic;" and every effort possible will be made to give the student a knowledge of the principles and method of correct habits of thinking.

At the beginning of Senior year, the class will commence the History of Philosophy, with the purpose of studying the movements of human thought and the relation of permanent ideas to the development of the race. The effort will be made to secure a clear and comprehensive idea of philosophy, tracing it from the early Greek speculations in regard to the origin of knowledge, to the Socratic movement, and the writings of Plato and Aristotle. This will be followed by an examination of Neo-Platonism and the movement at Alexandria.

Modern Philosophy will then be studied, noting the influence of Scholasticism, the work of Bacon and the importance of the Inductive Method, the relation of Idealism to Realism, and especial attention will be paid to Leibnitz, Kant, and Hegel.

This will lead to a study of the fundamental questions of ethics and the claims of Christianity.



GREEK.

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The studies in this department extend through three years, of which the first two are required of all candidates for the degree of Bachelor of Arts, while the work of the Junior year is elective.

The course is so arranged as to give the student an introduction to the several great departments of Greek Literature; and each author is studied from the literary as well as from the linguistic side. Particular care is taken to have the student acquire facility in reading Greek, and great stress is laid on reading at sight, throughout the course. At the same time accuracy is insisted on, and the student is required to translate into idiomatic English.

Greek prose composition and Greek syntax are taught in connection with the authors read, and are intended to be illustrative of them. Exercises consisting of connected discourse, based upon the Greek text read, are used for translation into Greek, and selected passages are made the basis of syntactical drill, while occasional talks on grammatical topics largely supersede grammar lessons.

The first half of the Freshman year is devoted to the study of Homer, carrying on and concluding the work begun in the Academy. The Phæacian episode of the *Odyssey* is read, and extracts are made from other portions of the poem. Lectures by the Professor of Greek discuss the Homeric poems and their position in literature, and illustrative readings are given.

In the second half-year, the *Apology* and *Crito*, or the *Phædo* of Plato, and select orations of Lysias, are read. The study of these authors is accompanied by a grammatical review and by syntactical exercises; and they serve also to illustrate Attic life and Attic law.

In the Sophomore year, the work centres in the Greek Drama. The *Prometheus* of Æschylus, the *Antigone* of Sophocles, and the *Iphigenia Taurica* of Euripides are carefully read, and the work is supplemented by lectures on the

drama, with readings from other plays of the three great masters. At the close of the year, the *De Corona* of Demosthenes is read and the political history of the period studied.

The elective courses for the Junior year are as follows:

**FIRST HALF-YEAR.**—Hellenistic Greek: The Gospel according to Mark, and selections from Lucian.

**SECOND HALF-YEAR.**—(1) Herodotus and Thucydides, or (2) Greek Lyric Poetry.

During the first half-year, weekly lectures are given on Greek Literature; during the second half-year, on Greek Art and Archæology.

Should students electing Greek desire it, a special course will be arranged for those who expect to teach the language.

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## LATIN.\*

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The aim of the instruction in Latin is primarily to give the student such a reading-knowledge of the language as shall serve as an introduction to further literary, philological, historical, or legal studies. To acquiring this practical mastery of the language all else is subordinated, though the study of the historical and legal aspects of Roman civilization, as well as of the private life of Rome, is not neglected.

The Freshman year is devoted to readings in class from Livy, from the popular philosophical writings of Cicero, and from the Odes of Horace. One hour a week is devoted to the historical study of Roman literature. This course will consist of lectures by the Professor of Latin, and will be supplemented by private readings, on the part of the students, from the translated works of the authors discussed. In addition, a series of private readings in the original, from the writings of Latin prose authors, is assigned to each student; reports of which are required from time to time. No special recitations are devoted to Latin writing, for it is believed

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\*The pronunciation of Latin used is in general the so-called "Roman Method."

that it can be pursued with more profit and pleasure in connection with the daily readings from classical authors; therefore, English sentences and narrative, based upon the subject matter of the Latin author in hand, are assigned daily for translation into Latin, and great importance is attached to this work.

In the first half of the Sophomore year, selections from the Satires and Epistles of Horace and from the Annals of Tacitus will be read, while the second half-year will be devoted to a study of Latin comedy, and plays of both Plautus and Terence will be read. Private readings in the original will be continued; but in the Sophomore year, Latin poets will be assigned. For the year 1891-92, two elective courses will be offered in the Latin department to Juniors and Seniors. The first will consist of a topical study of Roman history, two hours per week, in which several of the more important periods of the history of Rome will be studied very closely, and, so far as possible, from the original sources. The second course will consist of a brief survey of Roman law, one hour a week, in which Morey's Outlines of Roman Law will be used as a guide.

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## ENGLISH.

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In the Freshman year, selected essays form a basis for the study of prose literature and rhetorical analysis; and as a guide for this work, Minto's Manual of English Prose Literature is read. Four plays of Shakespeare are also studied, and much collateral reading is done in connection with the required work in composition. The latter part of the year will be largely given to the study of the History of English and American Literature, followed in a text-book and by lectures.

In the Sophomore year, much attention will be given to argumentative discourse, dissertation, and oration. Anglo-

Saxon and early English are studied, with selections from early English writers.

An elective course is offered for the Junior and Senior years. The course consists of lectures on the masterpieces in English, and a historical study of Literature from 1688 to the present time.

An elective in Anglo-Saxon (two hours a week) is also offered to Juniors and Seniors. Careful attention will be given to the study of the earliest period of our literature and to the historical development of the language.

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## ORATORY AND PARLIAMENTARY DEBATE.

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The aim of instruction in this department is the development of natural, graceful, and effective oratory; to make good speakers, and ready debaters. The training includes drill in vocal gymnastics, distinct enunciation, and graceful gesture, together with the principles and resources of the art of elocution and the philosophy of expression. For a statement concerning the College rhetorical exercises and the prize oratorical and declamatory contests, see page 54.

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## GERMAN AND FRENCH.

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The object of these courses is to make ready and appreciative readers of the languages, and also to furnish a basis on which a speaking-knowledge of them may be rapidly acquired. As far as possible, the language studied will be the medium of instruction in the class-room. Attention is given to correct writing, the study of idioms and synonyms, translation from English, original composition in each language, and to the study of its literature.

All students are required to take one year each of German and French before completing their course. In the Junior and Senior years, there are electives in the classical and scientific literatures of both German and French, where conversation is made a special feature.

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## COURSES OF INSTRUCTION FOR 1891-92.

### GERMAN.

*Freshman Class.*—(Three hours a week.)—Harris' Prose Composition; Schiller's Wilhelm Tell; Freytag's Die Journalisten; Gutzkow's Zopf und Schwert.

*Elective Course.*—(Two hours a week.)—Harris' Prose Composition; German Conversation; Lessing's Minna von Barnhelm and Nathan der Weise; Goethe's Iphigenie auf Tauris and Egmont.

### FRENCH.

*First Year.*—(Four hours a week.)—Edgren's French Grammar; Super's French Reader, and easy French reading.

*Second Year.*—(Three hours a week.)—Blouet's French Composition; Moliere's Les Femmes Savantes; Racine's Britannicus; Corneille's Polyucte.

*Elective Course.*—(Two hours a week.)—Blouet's French Composition; French Conversation; Racine's Athalie; Corneille's Le Cid; Moliere's Le Misanthrope.

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## MATHEMATICS AND ASTRONOMY.

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The two terms of the Freshman year are devoted, one to Trigonometry, plane and spherical, and the other to advanced Algebra. The topics under the latter head which receive special attention, are Series (including the Binomial Formula), Logarithms, and Numerical Higher Equations. In the Sophomore year, the Conic Sections are studied by the method of Analytical Geometry. This completes the required course



in pure mathematics. The calculus is an optional study of the Junior year; and applications to mathematical physics or astronomy may be made in the Senior year, if the student so elect. Astronomy is a required study in one term of the latter year, and Professor Young's General Astronomy is used as a text-book.

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## PHYSICS.

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A course in Physics, extending through one year, is required of all regular members of the Junior class. The aim always kept in view is not only to give students a theoretical knowledge of the subject, but also to offer them facilities for laboratory work and acquiring skill in experimentation.

A large number of new physical instruments has been bought this year, and new apparatus is being made in the laboratory continually. Among the latter are vibrators, resonators, and reflectors to show electrical oscillations.

The course will embrace Sound, Light, and Electricity. It does not include a systematic study of Heat, but this subject will be repeatedly touched upon in the study of the other three subjects. As guides to laboratory work, Glazebrook and Shaw's Practical Physics and Chute's Practical Physics will be used.

This year, S. P. Thompson's Lessons in Electricity and Magnetism, and Deschanel's volume on Sound and Light, were studied in the class-room. The former work was supplemented by lectures on recent advances in theoretical electricity and on the practical application of physical principles. The telegraph, telephone, electric light and electric railway received due attention.

In the Senior year, a more advanced course in electricity is offered as an elective. The course for the coming year will be on the Alternate Current Transformer (Fleming). Students electing it must have had a course in the Differential and Integral Calculus.



## CHEMISTRY.

(1.) Instruction is given by lectures, illustrated with numerous experiments, and by recitations, which include chemical manipulation and experiment by the students. The repetition of the class experiments and the trial of other and pertinent reactions and processes, under the supervision of the instructor, form an essential feature of the plan of instruction. The lectures are supplemented by a prescribed course of reading in Chemical Technology and Sanitary Science.

(2.) The design of the course is to give the student a general knowledge of chemistry, to inculcate habits of close observation, and to accustom him to scientifically accurate methods of experiment and inquiry. It aims to teach the principles and the practical use of chemistry rather than to burden his memory with a multiplicity of details. It seeks to stimulate the student to constantly apply his knowledge of chemistry in explanation of the phenomena of daily life. By numerous examples, it shows him how to obtain from books the details familiar only to the professional chemist. Especial attention is given to Applied Chemistry; the subject is also so presented as to form a basis for the study of Biology, Sanitary Science, and Geology.

(3.) Pneumatic Chemistry is treated at the beginning of the course and the student familiarized with the generation and manipulation of gases. The elementary principles of the science are outlined, and chemical notation is constantly used. With the discussion of the non-metallic elements, many topics of sanitary importance are brought into prominence, *e. g.*, the atmosphere and ventilation, fuel and heating, the examination of potable water, etc., etc. The metals are briefly treated in respect to their chemical combinations, but somewhat more fully in their metallurgy and their application to the arts. The writing of chemical formulæ, in explanation of reactions, is brought prominently

forward in this part of the course. A short time is next devoted to the explanation and practice of inorganic qualitative analysis. This in turn is followed by a few typical examples of quantitative analysis. In the presentation of Organic Chemistry the same plan of instruction is continued as far as practicable. The laws of chemical combination are more fully elaborated. Certain groups of substances are selected to typically represent the vast body of organic compounds. The selection of groups and of particular substances and processes for discussion, is governed very largely by economic and practical considerations.

#### ADVANCED COURSES (ELECTIVE).

(4) The following courses have been arranged for students who prefer to continue the chemical work of the Sophomore year:

(a) *General and Applied Chemistry*.—This course follows, in the main, the outlines of the work of the required course. Theoretical Chemistry is much more fully treated, and more elaborate and delicate experiments are arranged to illustrate and explain general laws. The more recent advances, both in theoretical and applied chemistry, are noted and discussed in connection with the various elements, or groups, under consideration. The applications of chemistry to the arts are studied in greater detail, and the modern uses of chemistry in the sciences of Biology, Medicine, Geology, etc., are treated as fully as the length of the course will permit. Instruction is given mainly by lectures, but references are freely made to the works of Remsen, Fownes, etc., for particular subjects. Certain works on Sanitary Science are assigned for private study and the preparation of abstracts and written discussions. In lieu of the usual preparation of lessons for recitation, students are required to perform in the laboratory the experiments given in the lectures, and such others, in addition, as may be outlined for practice. The hours of lecture and recitation are four per week, continued for one year. The hours required for laboratory work are eight per week for the same period.

(b) *Qualitative Chemical Analysis*.—This course is open only to students who, by previous study of General Chemistry, are properly qualified for the work. The time occupied by the course is the first term of the year, and the hours required for laboratory work are from 2 to 4 o'clock P. M., five days per week. The lectures will be given at such hours and at such intervals as shall be best suited to the class. A text-book for reference and study will be assigned at the beginning of the term. The work of the course comprises experimental drill in obtaining characteristic reactions of the more common elements, study of empirical formulæ and symbolic expression of reactions, solution of substances, separation of groups of elements, and finally, analysis, first, of simple salts, and later of complex mixtures. The analytical work is confined almost wholly to inorganic substances, but includes certain common organic acids and a few organic bodies of general and medicinal use. The final examination is both experimental and theoretical in character.

(c) *Quantitative Chemical Analysis*.—The course in Quantitative Analysis presupposes a knowledge of General Chemistry and Qualitative Analysis. In it are included volumetric measurement of liquids, the accurate use of fine balances, and the general subject of stoichiometry. In the earlier part of the course the student is made familiar with gravimetric and volumetric determinations of single elements by approved methods. Complete analyses of simple salts follow next in order. Salts, alloys, minerals, ores, slags and mineral water are among the substances comprising the list required to be analyzed by the student. The analysis of inorganic substances only, is studied in this course. As a final part of his work in the course, the student is given practice in a few of the commercial, or rapid determinations of the constituents of ores and minerals.

The course occupies the last term of the year for its completion. The hours for laboratory work are from 2 to 5 o'clock P. M., five days per week. Lectures will be given

at intervals throughout the course. The text-book for this year will be *Quantitative Analysis*, by Cairns.

(5). The cost of chemicals, glassware, and supplies used by students, in any of the courses mentioned, must be defrayed by themselves. A deposit, estimated as probably sufficient to cover the ordinary expenses of the work, must be made by each student with the instructor, at the beginning of the term. Any balance remaining will be returned at the completion of the course. Glassware and general supplies (but not chemicals), if in condition for reissue, may be returned, subject to a small discount. The deposit required for each course is as follows:

General Chemistry—Sophomore year.....	\$ 2 00
General Chemistry—Elective Course.....	10 00
Qualitative Analysis—Elective Course.....	15 00
Quantitative Analysis—Elective Course.....	15 00

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## GEOLOGY.

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The study of Geology is taken up by students in both the A. B. and Ph. B. courses, as an elective in the Senior year. Five hours per week, throughout the year, are devoted to the work.

The lectures and recitations are supplemented by field work and excursions to points of geological interest in the vicinity of the College. An important consideration in laying out the course in Geology has been the desire to inculcate the habit of close and accurate observation, and of logical and practical deduction from the phenomena brought to notice. It is sought to show the history of the Earth and the development of its flora and fauna from the evidences presented in the rocks themselves. The theories of evolution and development receive attention in connection with the work in Palæontology. The treatment of Economic Geology is made relatively full, because of the proximity of mining and metallurgical operations.

The study of Geology is peculiarly attractive and practical in this section of the State. In few localities can be found exposures of so many and varied strata of different geological ages. The region about Pike's Peak is particularly rich in the number and excellence of both rare and common minerals produced. Fossils are abundant at many points, and the older and later rock formations are often found in close proximity. The work of the course includes the practical study of Lithology with the preparation of rock-sections on the lithological lathe. The lithological microscope opens to the student the most modern lines of investigation into the nature of rocks.

The character of the region about the College is well adapted to illustrate Dynamical Geology. Faults, veins, dikes, water erosion, sand-carving and glacial action can be found near at hand. A good selection of lantern slides enables the instructor to add to the natural illustrations of the surrounding district, the evidences collected from many other favored localities.

The text-book for the year will be Elements of Geology, by LeConte, edition of 1891.

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#### DETERMINATIVE MINERALOGY AND BLOWPIPING.

This course is offered as an elective in the Junior year. It is recommended to students who purpose taking the Geology of the Senior year. The instruction includes: Use of the blowpipe; reactions of common elements with fluxes; colorations of flame; reactions on charcoal; examinations in open and closed tubes, etc. Following these elementary steps, the determination of elements and certain radicals in compounds and mixtures, is taken up. The analysis and determination of common minerals occupies a large portion of the course. As a concluding work, is given the blowpipe assay of ores of silver, gold, copper, and lead. To students, engineers, physicians, and others interested in scientific pursuits, the blowpipe is frequently an indispensable adjunct. Its correct and easy use often rapidly and surely clears away



uncertainties, and proves of great value. To collectors of minerals, and to geologists, it must always be an important assistant. The vicinity of the College is unusually rich in mineralogical specimens.

The text-book used is Cornwall's Manual of Blowpipe Analysis, etc.

The hours required are from 2 to 3:30 o'clock P. M., four times per week throughout the first term of the year. The examination is entirely experimental.

## BIOLOGY.

### FIRST YEAR—GENERAL BIOLOGY.

*First Half-year.*—The object of this course is to give the student a clear conception of the fundamental Biological principles.

The lower forms of plant and animal life will be studied, such as Amœba, Infusoria, Hydra, Earthworm, Yeast, Mould, Spirogyra, etc.

*Second Half-year.*—Following the plan of the previous work, higher forms will be studied, such as Crayfish, Clam, Snail, Frog, Cat, etc.; Ferns and flowering plants.

The instruction will be given by lectures and laboratory work. The laboratory work is designed to supplement the lectures and to enable the student to examine for himself the facts discussed in the lecture.

*Text Books.*—Sedgwick and Wilson, General Biology; Huxley and Martin, Biology; also library consulted.

### SECOND YEAR—BOTANY.

I. Introduction.—Consideration of principles of vegetable physiology and anatomy.

II. Study of Types.—Study of the life history of representatives of the plant groups, from the lowest to the highest.



III. Systematic Work.—Exercise in the determination of species throughout the work, with drawings and diagrams of objects studied.

*Text Books*—Cryptogamic Botany, Bennett and Murray; Physiological Botany, Goodale.

De Bary, Goebel, Sachs, and others, consulted in the library.

#### THIRD YEAR—ZOOLOGY.

I. Anatomy of Invertebrates.—Beginning with unicellular organisms, a familiar example of each of the various plans of invertebrate structure is studied in detail, the examination of a typical form being followed by a rapid survey of the common allied animals.

II. Anatomy and Physiology of Vertebrates.—Illustrative laboratory work with preparation of permanent specimens.

The general plan of the first half-year will be followed.

*Text Books*.—Text Book of Zoology, Claus and Sedgwick. Library consulted.

#### FOURTH YEAR.

*First Half-year*.—Embryology. (Balfour and Foster, Haddon, Gegenbauer.)

*Second Half-year*.—Comparative Anatomy. (Wiedersheim.)

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#### HISTORY.

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English History to 1702 is a required study (four hours, first half-year) for Juniors; constitutional history, mainly. After the present year, a four-hours course in American History will be required of Juniors in the second half-year; in 1891-92 this course will be in political history of the United States since 1809, and will be open to Seniors as Elective Course F, in continuation of the course given in 1890-91.

Elective Course G (for Seniors and Juniors; three hours, second half-year) will continue the constitutional and political History of England from 1702.

Elective Course H (for Seniors; four hours, first half-year) will deal with Modern European History.

## ECONOMIC AND POLITICAL SCIENCE.

The Juniors take as a required study a course in elementary Political Economy, using Mill as the principal text-book; in 1891-92 this will be a two-hours course throughout the year.

Elective Course B (for Seniors; two hours, first half-year) will deal with Money and Taxation, with particular reference to current popular discussions.

Elective Course C (for Seniors and Juniors; three hours, second half-year) will pursue in detail other selected subjects in Political Economy.

[In 1890-91, instead of Courses B and C, one special-subject course is given, upon the Rental-Tax, Railways, and Socialism.]

Elective Course D (for Seniors and Juniors; two hours, first half-year) will be upon Popular Government; chiefly upon the conditions of civil liberty in the United States, but with comparison of English and Swiss institutions.

Elective Course E (for Seniors and Juniors; two hours, second half-year) will examine methods of Government in Europe, as now existing.

## COURSES IN HISTORY AND IN ECONOMIC AND POLITICAL SCIENCE.

### REQUIRED:

#### *First Half-Year.*

JUNIORS—English History.....	4 hours
Political Economy .....	2 hours

*Second Half-Year.*

American History .....	4 hours
Political Economy .....	2 hours

## ELECTIVE:

*First Half-Year.*Described as  
Elective Course

SENIORS—Political Economy .....	2 hours	B
Popular Government.....	2 hours	D
Modern European History .....	4 hours	H

*Second Half-Year.*

Political Economy .....	3 hours	C
European Governments .....	2 hours	E
English History, since 1702.....	3 hours	G
American History, since 1809...	4 hours	F

*First Half-Year.*

JUNIORS—Popular Government .....	2 hours	D
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*Second Half-Year.*

Political Economy .....	3 hours	C
European Governments .....	2 hours	E
English History, since 1702.....	3 hours	G





*THE CUTLER ACADEMY.*





## THE CUTLER ACADEMY.

This fitting-school, named in honor of one of the most generous and steadfast friends of Colorado College (Henry Cutler, of Massachusetts), provides a thorough preparation either for our own or any college in the United States. While the preparatory training is the principal aim, the plan of study is so arranged as to meet the requirements of students who do not propose going on into college work. The course is a thorough one, embracing three years, and the teaching is carefully conducted, by experienced instructors, most of them the same who are employed in the college. Correspondence concerning the Cutler Academy should be addressed to the Assistant Principal, George L. Hendrickson, 805 Cascade Avenue.

## FACULTY.

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WILLIAM FREDERICK SLOCUM, JR.,  
*Principal.*

GEORGE L. HENDRICKSON, *Latin,*  
*Assistant Principal.*

FLORIAN CAJORI, *Physics.*

FREDERIC A. CHAPMAN, *Elocution.*

WILLIAM M. HALL, *History.*

FRANK H. LOUD, *Mathematics.*

MARTHA R. MANN, *Biology.*

AUGUSTUS T. MURRAY, *Greek.*

SYLVESTER PRIMER, *French and German.*

WILLIAM STRIEBY, *Chemistry.*

ELOISE WICKARD, *English.*

## REQUIREMENTS FOR ADMISSION.

Candidates for admission to the Cutler Academy are expected to have finished the eighth grammar grade in the public schools, or otherwise to have pursued a similar course, and at the discretion of the Faculty certificates for this work may be received. The examinations for entrance cover the subjects of Arithmetic, English Grammar, Spelling, and Geography, none of which are included in the courses of the Academy.

## COURSES OF STUDY.

The figures after each subject indicate the number of recitations per week.

### CLASSICAL COURSE.

<i>First Year.</i>	
Latin.....	5
Algebra.....	5
English, (first half-year,).....	5
English, (second half-year,).....	2
Physiology, (second half-year,)..	3
<i>Second Year.</i>	
Geometry, (to Easter,).....	4
Greek History, (from Easter,)..	4
Latin.....	5
Greek.....	5
English.....	2
<i>Third Year.</i>	
Latin.....	5
Greek.....	4
Physics.....	4
English.....	3

### LATIN-SCIENTIFIC COURSE.

<i>First Year.</i>	
Latin.....	5
Algebra.....	5
English, (first half-year,).....	5
English, (second half-year,).....	2
Physiology, (second half-year,)..	3
<i>Second Year.</i>	
Geometry, (to Easter,).....	4
English History, (from Easter,)..	4
Latin.....	5
Chemistry, (first half-year,).....	5
Botany, (second half-year,).....	5
English.....	2
<i>Third Year.</i>	
Latin.....	5
German.....	4
Physics.....	4
English.....	3

## GREEK.

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The preparatory work in Greek extends over two years, and is intended to give a careful training in the elements of the language. Especial attention is given to reading, in order that the student may, as early as possible, obtain a certain command of the language itself—not merely of its grammatical forms. To this end, reading connected prose is introduced as soon as the most essential forms have been mastered. No beginning book is used, but simple passages for translation are prepared by the instructor, until the class is sufficiently advanced to take up Xenophon. Greek composition is taught in connection with the reading of Xenophon. Here, again, no text-book is required. Grammar and syntax are taught gradually as difficulties present themselves in reading; and frequent reviews secure thoroughness. Care is taken always that the student understands what he translates, and the use of idiomatic English in translating is insisted on.

Every effort is made from the outset to lead the student to regard the authors studied from a literary standpoint, and to cultivate in him a love for the Greek language and for Greek Literature.

The work is arranged as follows:

*First Year*—Greek Grammar, Hadley-Allen; exercises in translation; Xenophon's *Anabasis*, Kelsey.

*Second Year*—Xenophon continued; Homer's *Iliad*, Seymour.

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## LATIN.

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The preparatory course in Latin extends over a period of three years, the first of which is devoted to Collar and Daniell's *Beginner's Latin Book*, and easy selections from various Latin authors. In the second year, several of Nepos' *Lives*

will be read with the second and fourth books of Cæsar's Gallic War, and selected orations of Cicero. The third year is mainly devoted to the study of Virgil, in addition to which a few of the simple letters of Cicero (especially from *Ad Familiares XIV.*) will be read. One hour per week of this year is devoted to a brief historical sketch of the Roman Republic. No special recitations are given to Latin writing, for it is believed that this subject can be pursued with more pleasure and better results in connection with the daily readings from classical authors. For the aims and methods of study in this department, see further, page 20.

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### ENGLISH.

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This course is designed to prepare students for the College course, and leads up systematically to the plan for the Freshman year. In the first year, Meiklejohn's English Language, Part I., is made the basis of work. Much attention is given to word-building, derivation, and composition. In the second year, Meiklejohn's Parts II. and III. form the basis of the work. Selections from Irving and Scott are read in class, and much attention is given to composition. In the third year, Welsh's Rhetoric is used in connection with Swinton's Studies in English Literature. Two plays of Shakespeare are required.

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### ELOCUTION.

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For a description of the work done in this department, see pages 22 and 54.

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### GERMAN.

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German is begun in the third year of the Academy. This course of study is as follows:

(Four hours a week.)—Joynes-Meissner's German Grammar; Joynes' German Reader; Chamisso's Peter Schlemihl, and Gustav Freytag's *Aus dem Staate Friedrich's des Grossen*.

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## MATHEMATICS.

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The Mathematical course in the Academy comprises two branches, Algebra and Geometry, as the student is expected to have completed Arithmetic before applying for admission. Wentworth's Complete Algebra and New Elementary Geometry are the text-books used.

In the first year, Algebra is begun, and is carried through the subject of Quadratic Equations. In the second, Plane Geometry is studied, and the pupil, besides learning the proofs of demonstrated theorems, obtains exercise in inventing proofs for himself. In the third year, Solid Geometry is taken up; and toward the end of the year a sufficient amount of time will be devoted to a review of Algebra. The aim of the instruction in these three years is a thorough preparation for college work, by means of familiarity with the ground principles and correct habits of mathematical thought.

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## PHYSICS.

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Elementary Physics is taught to students in the third year of the Academy course. The subject is approached by the inductive method. Great stress is laid upon laboratory practice, which constantly accompanies the text-book work. The apparatus for this course is ample, and students are made to perform nearly all experiments themselves. It is found that this objective method makes the subject more interesting to the pupil, gives him more valuable training, and impresses physical facts more deeply and lastingly upon his mind. The



text-book used is Gage's Elements of Physics. Chute's Practical Physics serves as a guide in the laboratory.

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## PHYSIOLOGY.

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The gross anatomy, physiology and hygiene of each system is studied in outline. Each subject is illustrated by specimens or dissection. Special attention is given to practical deductions as to food, heating, exercise, ventilation, etc. Martin's Human Body, briefer course, is the text-book used.

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## BOTANY.

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The preparatory Botany consists of a course in General Morphology and Principles of Classification of Phanerogams. The student makes drawings or diagrams of most of the forms studied. Frequent field excursions supplement the course, and an Herbarium is collected. Gray's Structural Botany is used as text-book.

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## HISTORY.

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The histories of Greece, Rome and England are studied in the Academy with a view to making them supplement the studies in Greek, Latin and English. Text-books are used in this study, more or less, but at present no announcement concerning them, for the coming year, can be made.



*CIRCULAR of INFORMATION.*



## LOCATION.

The City of Colorado Springs is admirably adapted for a college town. At its very foundation, plans were wisely laid, and the succeeding growth has maintained a most healthy character of morality and culture, to which has been added the element of wealth, increasing, since the construction of radiating railroad systems, at a brisk though not an abnormal rate. The result is a prosperous, wide-awake town, from which saloons and all attendant destructive influences are absent, having a population drawn from every section of the Union, as well as from England, and in a slight degree from other foreign countries; but, whether native or foreign, composed almost wholly of the better class of settlers; a town at present of about twelve thousand inhabitants, but with all the conveniences of a larger city—water-works, sewers, electric lights, electric street railway, mail delivery, telephone communication north, south, and west. It is a noted health-resort, but has nothing of the air of a hospital. But while it possesses the attractions of a city, the lover of nature may seek far for a spot more favored. The mountains are close at hand, and their serrated line occupies about a third of the horizon. In their centre stands Pike's Peak, a name familiar everywhere, to whose summit henceforth the traveler may ascend by carriage or railway-car, or by romantic bridle paths, remote from the thronged lines of summer travel. The climate has obtained a world-wide reputation. Its curative qualities consist largely in the opportunity for out-door exercise, afforded by the great number of fine days, to which the dryness and rarity of the air adds a quality exhilarating to all, and regarded as a specific in cases of malarial disease, asthma, and incipient phthisis. Students unable to work in other climates may here continue their studies, while at the same time making a permanent gain in health. This plan has been successfully carried out in a number of instances.

Taking all considerations together, the words of a recent

number of the *Colorado School Journal* appear but reasonable :

“No point in our State ever combined so many advantages for the establishment, growth and greatness of a college as does Colorado Springs. It is manifestly the point about which scholars and students, men and women of culture, wealth, and leisure will reasonably gather.”

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## SPECIAL STUDENTS.

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Special students will be received, at the discretion of the Faculty, into such classes as they are qualified to enter.

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## DEGREES AND HONORS AT GRADUATION.

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The College offers two degrees, those of Bachelor of Arts and Bachelor of Philosophy. These are intended to be of equal value, representing the same number of years of work. The degree of B. A., as will be seen by examination of the course of study, represents a proficiency in the “humanities” not inferior to that for which the same degree is given in the best known institutions of our country, while suitable recognition is made of the claims of the physical sciences. For the degree of Ph. B., a more extended study of these sciences is required, as well as some additional work in modern languages, while the study of Greek is omitted.

Special honorary mention is made at graduation of students who have shown particular merit in the work of any one or more of the principal departments of instruction.

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## LIBRARY.

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The library now embraces about seven thousand volumes and upward of a thousand pamphlets. All the government



publications of the United States are regularly received, as issued. The Strettell collection, the gift of Arthur E. V. Strettell, contains a large number of standard literary works in French, besides other valuable books. Over a hundred volumes and pamphlets, relating to the civil war and slavery in the United States, were received as the bequest of Mrs. V. Pierson. The recent gift of about three hundred volumes, presented by Mr. George H. Putnam, of New York, also deserves especial mention. An exceedingly valuable accession was received last year from Mr. J. J. Hagerman, of Colorado Springs, consisting of the London edition (Valpy, 1820-30,) of the Delphin classics. It is believed that there are not in America more than three or four sets of this work, which embraces the text of the classic Latin authors, with all the notes and emendations of the best critics up to the date of publication. The library is also well supplied with the leading American and European periodicals bearing on the work of the various departments.

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## READING ROOMS.

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In connection with the library is a reading room for the use of students and friends of the College, where the current magazines of literature and science, as well as a number of leading newspapers, may be consulted. The Young Men's Christian Association of the College has also a similar room in Hagerman Hall.

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## LABORATORIES AND APPARATUS.

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The laboratories of the College supply the means for thorough and practical training in the scientific branches of the curriculum.

The chemical laboratory is furnished with tables, desks, hood, city water, condenser for distilled water, blast lamp,

balances, and all apparatus needful for accurate and practical work. Each student is assigned to a separate desk, where he may pursue his work without interruption, and in which he may keep his apparatus under his own lock and key. Connected with this laboratory is a dark room, well fitted out for photographic work.

Instruction in blowpiping and determinative mineralogy is conducted at side tables, which are provided with compartments, under lock and key, for the safe keeping of all blowpipe supplies. Each student is assigned to a position at the table, and provided with a separate compartment. Complete apparatus peculiar to this study is kept in stock, and is sold to students at cost. Blowpipe apparatus once used cannot be returned to the store-room.

The apparatus for the illustration of Physics and Mechanics, is very good, and is being increased as rapidly as possible where the need is felt. A fine stereopticon, operated with the calcium light, is used by all departments of the College in presenting those topics which are suitable for pictorial illustration. About five hundred selected photographic views, covering many subjects, are now in the possession of the College. The Herbarium is made up in great part of a classified and mounted collection of pressed Colorado flora. Several microscopes and some other apparatus help the students in pursuing the studies of Botany and Natural History. The cabinets are well supplied with specimens illustrative of mineralogy and lithology. A lathe for cutting rock-sections, and a large collection of classified rock-section slides, to be used with the fine lithological microscope, open the way to the most modern research in this direction.

A fine set of surveying instruments—transit, plane-table, sextant, leveling rods, stadia rods, steel tapes, etc.—enables the class in surveying to gain important practical experience in this department.

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## METEOROLOGICAL OBSERVATORY.

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A set of self-registering instruments, valued at \$350, has

been put in charge of the Professor of Mathematics. These instruments are of the pattern devised by Dr. Daniel Draper for the automatic continuous register of pressure, shade-temperature, and radiation. A similar continuous register of the wind's direction and velocity is also kept, while during the past year a Richard thermograph and barograph have been in operation, thus affording means of comparison and correction for the Draper instruments.

These instruments are mostly in Hagerman Hall, at the office of the Director (Prof. F. H. Loud) of the Colorado Weather Service, which was established by an act of the recent Legislature to continue the work begun by the Colorado Meteorological Association, and carried on for some years past at the College with the co-operation of the United States Signal Service.

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### HAGERMAN HALL.

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This building is a substantial stone structure, warmed with steam, and has bath rooms, reading and reception rooms. There is also a laundry in connection with the house, and a dining room that accommodates one hundred and fifty students. Those rooming out of the building can secure meals here at low rates.

It is the purpose of the trustees to make this building, as nearly as possible, *a home* for students and such instructors as desire to make it their residence while connected with the College. Accommodations at Hagerman Hall are provided for young men only.

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### PHYSICAL TRAINING, EXERCISE AND ATHLETIC SPORTS.

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A volunteer military company has been formed by the students themselves, and meets several times a week for drill.

Encouragement is given to a wise amount of interest in athletic sports, and the College campus affords ample room for the usual college games.

The opportunities for walks and all out-of-door exercise are unusually fine during all the year.

A gymnasium is in course of construction and will be ready for use at the beginning of the next academic year.

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## MUSIC.

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It is hoped that arrangements will be made for the opening of a Musical Department at an early date. In the meantime, special rates have been obtained for College students from two of the leading voice and piano teachers in the city.

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## PUBLIC LECTURES.

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The annual course of afternoon lectures at the College was given on successive Friday afternoons. The first series consisted of ten illustrated lectures on Physics, by Professor Florian Cajori. The subjects were as follows:

1. Electric Discharges through Rarefied Gases.
2. Polarization of Light.
3. The Spectrum.
4. Curiosities of Magnetism.
5. Curiosities of Electricity.
6. Systems of Electric Lighting.
7. Recent Researches in Theoretical Electricity and their Bearing upon the Theory of Lightning Rods.
8. Modern Chromatics.
9. Crystallization.
10. Sound.

Four lectures and two dramatic readings were also given by Prof. E. C. F. Krauss, as follows:

1. Das Nibelungenlied. (Narration of its contents.)

2. Schiller's Jugenddramen. (Die Räuber, Fiesco, Kabale und Liebe.)
  3. Heinrich Heine. (His life and works.)
  4. Die Faustsage. (Its origin and its shape in the popular belief.)
  5. Die Journalisten, Lustspiel von Gustav Freytag.
  6. Maria Stuart, Trauerspiel von Fried. Schiller.
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## THE COLORADO COLLEGE SCIENTIFIC SOCIETY

Holds monthly sessions in Palmer Hall. The objects of the Society are, "the discussion of recent scientific results, the promotion among its members of scientific inquiry and investigation, and the publication of the more important papers read at the meetings." The first annual publication, entitled *Colorado College Studies*, was issued last year. It contains the following papers: A Rigorous Elementary Proof of the Binomial Formula, by F. H. Loud; On certain Cubic Curves, by F. H. Loud; A Study of the Inductive Theories of Bacon, Whewell, and Mill, by Benj. Ives Gilman; A Mathematical Text-book of the Last Century, by F. Cajori; Horace, Od. III. I. 34, by George L. Hendrickson; Quinti Ciceronis Commentariolum Petitionis XI, § 43 (B. et K. vol. IX, p. 487), by George L. Hendrickson. The second annual publication will be issued in June.

Students are encouraged to attend the meetings of the Society.

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## STUDENTS' SOCIETIES.

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Associations, of both young men and young women, have been organized in the College, in affiliation with the College Christian Associations of the country, and are useful in promoting the fellowship of students in ways that harmonize with Christian aspiration and effort. A reading room is supported by the young men's association, lectures are given from time to time by various speakers, and religious meetings are held.



The two literary societies of the College furnish opportunity for independent work and drill in public debate and parliamentary practice.

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## PUBLIC SPEAKING.

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To familiarize the student with speaking before an audience, rhetorical exercises are held every morning at the close of chapel services, all the students and the Faculty being then present. At these exercises the College students are required to deliver original orations, and the Academy classes selected recitations. Besides meeting the growing demand for accomplished readers and speakers in refined walks of life, lay and professional, the training here received is of the highest value to students intending to pursue legal or theological studies.

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## PRIZE ORATORICAL CONTESTS.

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Two annual public prize speaking contests are also held; one given by the pupils of the Cutler Academy, and the other by the College students. The prizes are awarded to the first and second best in general oratorical ability, by a committee of judges selected by the contestants. The winners of the two first College prizes being selected to represent the College in a competition given once a year by the State Oratorical Association, and from which in turn a representative is sent to the Inter-State Oratorical Association.

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## PECUNIARY AID.

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### SCHOLARSHIPS.

The income of the following scholarships is devoted to the aid of worthy students who may need assistance in completing their course:



The Rice Scholarship of \$700, established by the friends of the Rev. Charles B. Rice, of Danvers, Massachusetts.

The Currier Scholarship of \$1,000, founded by Hon. Warren Currier, of St. Louis.

Several other scholarships are annually received from various sources.

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### SELF-SUPPORT.

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During the past year a number of students have been able to pay their way, wholly or in part, by work secured in various homes in the city.

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### COLLEGE BILLS.

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The term bills are issued September 23, and February 11, and are payable immediately, unless special arrangements are made with the President.

Students leaving before the end of the term pay full tuition, except under very unusual circumstances.

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### EXPENSES.

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Tuition, per year.....	\$35 00
Matriculation fee.....	5 00
Library fee.....	3 00
Table board, in Hagerman Hall, per week.....	4 00
Rooms warmed and furnished, per week, from.....	\$1.00 to 2 00

Towels, bed-linen and blankets must be provided by the students.

---

### THE WOMAN'S EDUCATIONAL SOCIETY OF COLORADO COLLEGE,

Was formed in April, 1889, by the ladies of Colorado Springs. The purpose of the society is "to give physical, intellectual,

and spiritual aid to young women who are students in any department of Colorado College." It has now about one hundred and fifty members. The membership fees go to form a beneficiary fund, from which loans are to be made on the following conditions:

1st. Loans may be made to girls who have been in the College one term and are recommended by the Faculty as in every way deserving of such aid.

2d. No student shall be allowed to incur an indebtedness to the society of more than \$300.

3d. Students may receive loans without interest until their connection with the College ceases; after which their notes are to draw interest at four per cent.

---

### MONTGOMERY HALL,

Which has been built by the Woman's Educational Society of Colorado College, will be ready for occupancy in September. This is a stone building, on the College grounds, is planned entirely with reference to the needs of students, and will furnish a home to twenty-six young ladies.

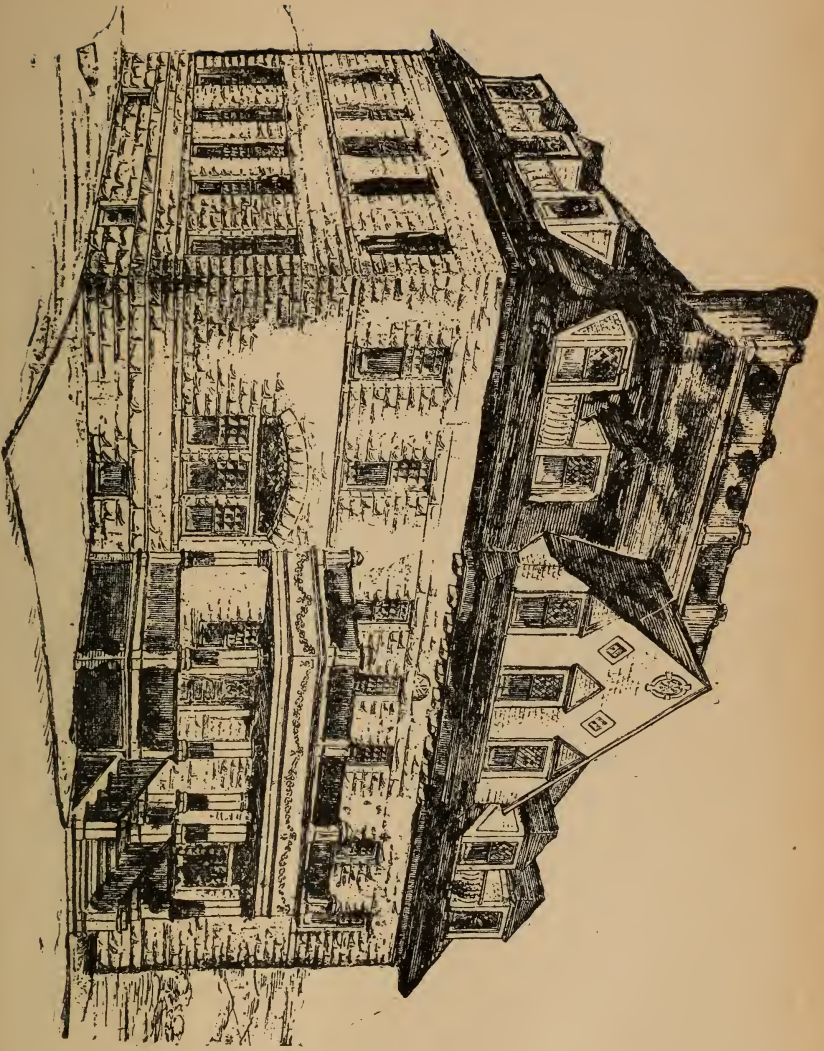
It is heated by an indirect system of steam heating, is lighted by electricity, and has every desirable convenience.

In addition to the students' rooms, reception, dining room, and parlor, there is a sunny room, with open fire, adjoining the housekeeper's, which is to be used as a "hospital" in case of illness among the students.

It is the aim of those who give this building to make it a thoroughly comfortable and attractive home.

The price of board and rooms will be at the lowest possible figure.

MONTGOMERY HALL.





*APPENDIX.*

## PREPARATORY COURSES OF STUDY

ADOPTED BY THE COLORADO STATE TEACHERS' ASSOCIATION.\*

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### FOR ADMISSION TO THE CLASSICAL COURSE.

**MATHEMATICS.**—Algebra, through Quadratics; Wentworth's School, Wells' Academic, or Olney's Complete. Plane Geometry, Wentworth's, or equivalent.

**LATIN.**—Latin Lessons, with Grammar; Four Books of Cæsar's Commentaries; Six Books of Virgil's *Æneid*; Six Orations of Cicero; Prose Composition.

**GREEK.**—Greek Lessons, with Grammar; Four Books of Xenophon's *Anabasis*; Three Books of Homer's *Iliad*; Prose Composition.

**HISTORY.**—Greece and Rome.

**ENGLISH.**—As recommended by the New England Association of Colleges.

**PHYSICS.**—Avery's or Gage's Physics, or an equivalent, with experimental laboratory work.

### FOR ADMISSION TO THE SCIENTIFIC COURSE.

**MATHEMATICS.**—Algebra, through Quadratics; Wentworth's School, Wells' Academic, or Olney's Complete. Plane and Solid Geometry; Wentworth, or equivalent.

**LATIN.**—Latin Lessons, with Grammar; Four Books of Cæsar's Commentaries; Six Books of Virgil's *Æneid*; Six Orations of Cicero; Prose Composition.

**SCIENCE.**—*Physics*—The equivalent of Avery's or Gage's text-book, with experimental laboratory work. *Chemistry*—The equivalent of Shepard's Abridged, Remsen's or Williams', with experimental laboratory work. *Botany*—The equivalent of Gray's How Plants Grow, with ten specimens; or *Geology* (optional instead of Botany)—The equivalent of Dana's Geological Story Briefly Told, with field work; or of Schaler's First Book, with field work.

**HISTORY.**—Ancient and Modern History.

**ENGLISH.**—Brief History of English Literature; Class study of same authors as required in classical course; Rhetoric.

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\* These requirements are subject to such modifications as the State Association may adopt at subsequent meetings.



ANNUAL BULLETIN  
OF  
COLORADO COLLEGE  
AND  
CUTLER ACADEMY.

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PUBLISHED BY THE CORPS OF INSTRUCTION, WITH THE APPROVAL  
OF THE BOARD OF TRUSTEES.

---

COLORADO SPRINGS, MARCH 15, 1892.

Palmer Hall

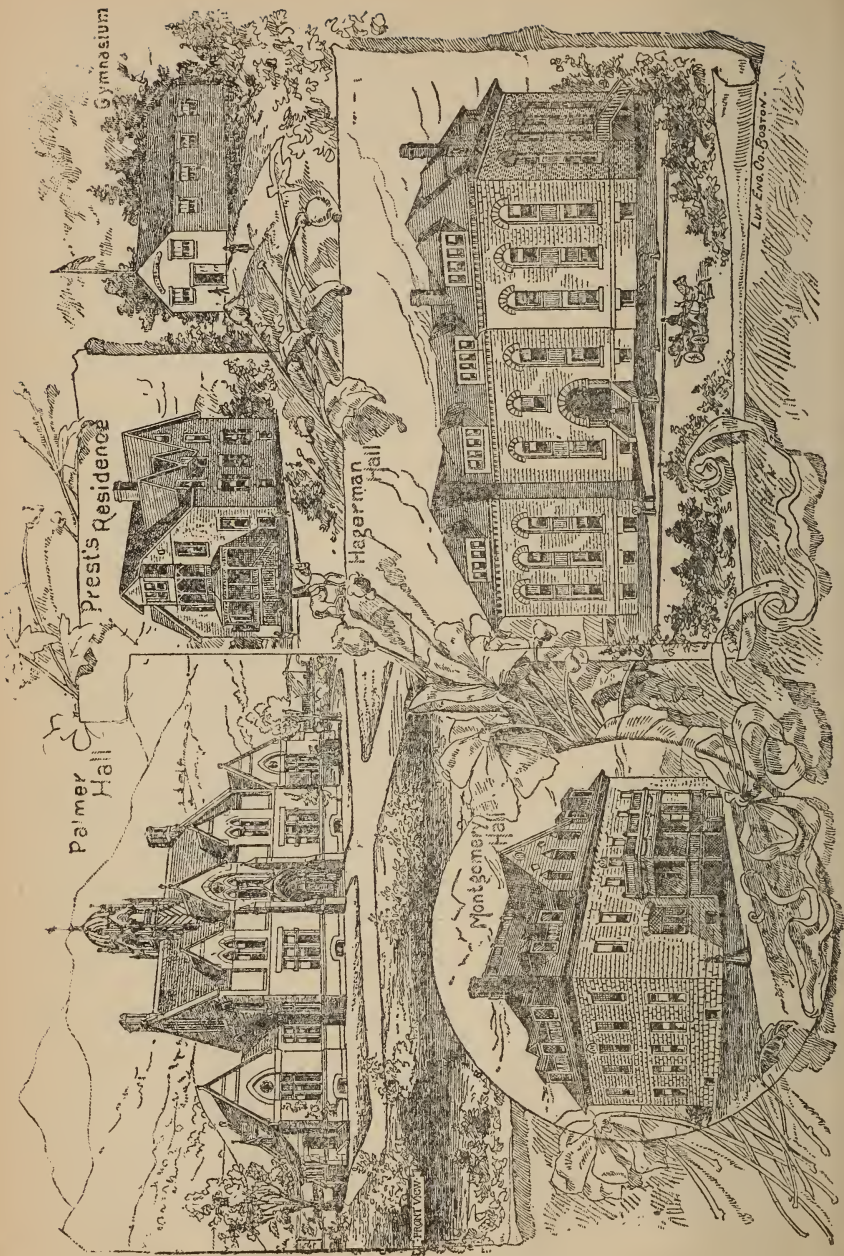
Prest's Residence

Gymnasium

Hagerman Hall

Montgomery Hall

Lux Eva Co. Boston.



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## ANNOUNCEMENT.

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Colorado College is the oldest institution of its kind in the State, having been incorporated in 1874, while Colorado was still a Territory, and first opened in May of that year.

Its charter places it under the government of a self-perpetuating board of trustees.

The first president was the Rev. James G. Dougherty, elected in 1875. In the following year, he was succeeded by the Rev. E. P. Tenney. In 1885, the office of president became vacant and so remained for three years—without interruption, however, of the work of the institution. In the fall of 1888, the present president, William Frederick Slocum, Jr., took charge of the institution.

The first permanent building—the central stone structure, since enlarged and now known as “Palmer Hall”—was occupied in 1880. The stone dwelling which serves as the president’s residence was purchased by the trustees in 1888. “Hagerman Hall” was erected in 1889, and is a home for young men and such instructors as desire to make it their residence while connected with the college. Another stone building, also on the college campus, begun in 1890 and completed in 1891, is named “Montgomery Hall,” and furnishes a home for young women who are students in the college. The gymnasium was built in 1891.

It is the purpose of the trustees to surround the students with healthful moral and religious influences, without the limitations of sectarianism. They have enlarged the faculty, and the courses of study have been so arranged that the same educational facilities are now offered in Colorado College as at the Eastern institutions of higher education. The attendance for the past year has been the largest in the history of the institution.

Attention is called to the Cutler Academy, the associated preparatory school, in which students are prepared for any American institution of collegiate grade.

## TRUSTEES OF THE COLLEGE.

---

WILLIAM F. SLOCUM, JR.,

*President of the Board.*

DR. B. F. D. ADAMS.

GEORGE W. BAILEY.

JOHN CAMPBELL.

SAMUEL CROOKS.

JOHN CURR.

HENRY CUTLER.

GEORGE DE LA VERGNE.

JAMES M. GORDON.\*

REV. JAMES B. GREGG.

J. J. HAGERMAN.

IRVING HOWBERT.

WILLIAM S. JACKSON.

F. L. MARTIN.

REV. RICHARD MONTAGUE, D. D.

GEORGE H. PARSONS.

REV. CHARLES B. RICE.

REV. LIVINGSTON L. TAYLOR.

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## EXECUTIVE COMMITTEE.

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J. J. HAGERMAN, *Chairman.*

GEORGE H. PARSONS, *Secretary.*

JOHN CURR.

WILLIAM S. JACKSON.

WILLIAM F. SLOCUM, JR.

---

J. H. BARLOW, *Treasurer of the College.*

---

\* Deceased.



## FACULTY.

WILLIAM FREDERICK SLOCUM, JR., B. A. (Amherst),  
*President and Professor of Philosophy.*

FLORIAN CAJORI, M. S. (Univ. of Wisconsin),  
*Professor of Physics.*

DOUGLAS J. CARNEGIE, M. A. (Cambridge, Eng.),  
*Associate Professor of Physics.*

FREDERIC A. CHAPMAN, LL. B.,  
*Acting Professor of Oratory.*

FRANCIS WHITTEMORE CRAGIN, B. S. (Harvard),  
*Professor of Geology and Paleontology.*

WILLIAM MONTAGUE HALL, B. A. (Yale),  
*Professor of Political and Social Science.*

WILLIAM HENRY LAMB,  
*Assistant in the Chemical Laboratory.*

FRANK HERBERT LOUD, B. A. (Amherst),  
*Professor of Mathematics and Astronomy.*

REV. GEORGE NATHANIEL MARDEN,  
*Professor of History.*

AUGUSTUS T. MURRAY, B. A. (Haverford College),  
 Ph. D. (Johns Hopkins University),  
*Professor of Greek.*

WILFRED P. MUSTARD,  
 M. A. (University of Toronto), Ph. D. (Johns Hopkins University),  
*Professor of Latin.*

MARION MCGREGOR NOYES,  
*President's Secretary and Instructor in Latin.*

WILLIAM STRIEBY, M. A. (University of the City of New York),  
 E. M. (Columbia College School of Mines),  
*Professor of Chemistry and Metallurgy.*

AUGUSTUS G. UPTON, M. A. (Oberlin College),  
*Professor of Literature and Librarian.*

MARTHA P. VALENTINE,  
*Instructor in German and French.*

ELOISE WICKARD, B. A. (Oxford Female College).  
*Professor of English.*

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*Lady in charge at Hagerman Hall,*  
 MISS FRANCES E. LESSLIE.

*Lady in charge at Montgomery Hall,*  
 MRS. EDWARD WOOLSEY BACON.



*COLORADO COLLEGE.*

## CALENDAR.

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### 1892.

- Apr. 14.....Thursday .....Easter recess begins at 1 P. M.  
 Apr. 19.....Tuesday.....Easter recess ends at 8:30 A. M.  
 June 7.....Tuesday..... } Second semi-annual examinations begin.  
                                       } First entrance examinations.  
 June 12.....Sunday .....Baccalaureate sermon.  
 June 13.....Monday .....College oratorical contest.  
 June 14.....Tuesday .....Cutler Academy graduation exercises.  
 June 15.....Wednesday .....Commencement exercises.
- 
- Sept. 20.....Tuesday.....Second entrance examinations.  
 Sept. 21.....Wednesday .....First half-year begins at 8:30 A. M.  
 Nov. 24.....Thursday..... } Thanksgiving recess.  
 Nov. 25.....Friday ..... }  
 Dec. 21.....Wednesday .....Christmas recess begins at 1 P. M.
- 

### 1893.

- Jan. 5.....Thursday.....Christmas recess ends at 8:30 A. M.  
 Jan. 26.....Thursday.....Day of prayer for Colleges.  
 Feb. 3.....Friday .....First semi-annual examinations begin.  
 Feb. 13.....Monday .....Second half-year begins at 8:30 A. M.  
 Feb. 22.....Wednesday .....Washington's birthday.  
 Mar. 30.....Thursday.....Easter recess begins at 1 P. M.  
 Apr. 4.....Tuesday.....Easter recess ends at 8:30 A. M.  
 June 6.....Tuesday..... } Second semi-annual examinations begin.  
                                       } First entrance examinations.  
 June 11.....Sunday .....Baccalaureate sermon.  
 June 12.....Monday.....College oratorical contest.  
 June 13.....Tuesday.....Cutler Academy graduation exercises.  
 June 14.....Wednesday .....Commencement exercises.  
 Sept. 19.....Tuesday.....Second entrance examinations.

# REQUIREMENTS FOR ADMISSION

TO THE

## FRESHMAN CLASS.

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS.

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### *Admission by Examination.*

1. IN ENGLISH.—The requirements in English are included within the limits of those prescribed for entrance into the New England colleges.

The candidate will be required to write a short English composition,—correct in spelling, punctuation, grammar, idiom, and division into paragraphs, and plain and natural in style,—on some subject already familiar to him. He will be judged by how well he writes; not by how much he writes. For convenience, and in order that the candidate may be acquainted with good models of style, the subjects will be taken from one or more of the following books, with all of which the applicant is expected to be familiar.

*For 1892.*—Shakespeare's Julius Cæsar, Scott's Marmion, Longfellow's Courtship of Miles Standish, Addison's Sir Roger de Coverley Papers, Macaulay's second Essay on the Earl of Chatham, Webster's first Bunker Hill Oration, Irving's Alhambra, Scott's Talisman.

*For 1893.*—Shakespeare's Julius Cæsar and Twelfth Night, Scott's Marmion, Longfellow's Courtship of Miles Standish, Addison's Sir Roger de Coverley Papers, Macaulay's second Essay on the Earl of Chatham, Emerson's American Scholar, Irving's Sketch Book, Scott's Ivanhoe, Dickens' David Copperfield.

*For 1894.*—Shakespeare's Julius Cæsar and Merchant of Venice, Scott's Lady of the Lake, Arnold's Sohrab and Rostum, the Sir Roger de Coverley Papers in the Spectator, Macaulay's second Essay on the Earl of Chatham, Emerson's American Scholar, Irving's Sketch Book, Scott's Abbot, Dickens' David Copperfield.

2. IN GREEK.—(a) A thorough knowledge of inflection, with the use of the accents, and the ordinary grammatical constructions. (b) Four books of the Anabasis, or three books and Cook's Selections from the Cyropædia. (c) Three books of the Iliad, with prosody and dialectic forms. (d) Translation at sight of average passages from Xenophon and Homer. (e) The translation into Greek of a passage of connected discourse of moderate difficulty. (The first forty-four exercises in Allinson's Greek Prose Composition will indicate the nature of the work required.) (f) Such a brief general view of Greek history as is contained in the revised edition of Pennell's History.

3. IN LATIN.—(a) An accurate knowledge of the forms and of the ordinary phenomena of the syntax of the language. (b) The translation at sight of average passages from Latin prose authors, and from the Eclogues or the Æneid of Vergil. (c) The translation into Latin of a passage of connected English narrative, which for the examination in 1892 will be based upon some portion of either the second book of Cæsar's Gallic War, or Nepos' lives of Miltiades and Themistocles. (d) An outline knowledge of the history of the Roman Republic.

Candidates are advised to include in their preparation for the Latin examination a thorough reading of at least the equivalent of four books of Cæsar's Commentaries, six books of Vergil's Æneid, and seven orations of Cicero.

4. IN MATHEMATICS.—(a) Algebra, through simultaneous quadratic equations. (b) Elementary plane Geometry, or as much as is contained in the first five books of Wentworth's Geometry (revised edition).



5. IN PHYSICS.—The elements of the subject as contained, for example, in Gage's Elements of Physics.

For the classes entering in 1895 and afterwards, Physics will be omitted, and the following requirement will be substituted:

IN GERMAN.—A good elementary knowledge of the language, such as is usually acquired by four or five exercises weekly through a year.

---

### *Admission by Certificate.*

Candidates who offer satisfactory evidence of having completed the Classical preparatory course adopted in December, 1891, by the Colorado State Teachers' Association, will be admitted without condition into the Freshman class, in the course leading to the degree of Bachelor of Arts. The preparatory course of the Association differs little from the subjects required for admission by examination; a statement of it is given on page 58 of this Bulletin.

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## FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF PHILOSOPHY.

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### *Admission by Examination.*

In English, Latin, Mathematics, and Physics, the requirements are the same as for the course leading to the degree of Bachelor of Arts.\* Candidates for admission to this course need not offer Greek, in place of which they will be examined in the following subjects:

1. IN CHEMISTRY.—Roscoe's Elementary Lessons in Chemistry will serve to indicate the amount required.
2. IN BOTANY.—Gray's Lessons (revised edition).

---

\* Except that Physics will continue to be required in 1895 and later.

3. IN PHYSIOLOGY.—Martin's Briefer Course, or an equivalent.

4. IN AMERICAN HISTORY.—An outline knowledge of leading facts.

For the classes entering in 1893 and afterwards, the following requirement will be added:

5. IN GERMAN.—A good elementary knowledge of the language, such as is usually acquired by four or five exercises weekly through a year.

---

### *Admission by Certificate.*

Candidates who offer satisfactory evidence of having completed either the Latin-Scientific or the Scientific preparatory course adopted in December, 1891, by the Colorado State Teachers' Association, will be admitted without condition into the Freshman class, in the course leading to the degree of Bachelor of Philosophy. Students so admitted, whose preparation was in the Scientific course and did not include enough Latin to qualify them to take Freshman Latin, will be permitted to take German or French instead in Freshman year. The preparatory courses of the Association are printed on page 58 of this Bulletin.

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## ENTRANCE EXAMINATIONS.

Examinations for admission to the College, and also to the Cutler Academy, will be held Tuesday, June 7, 1892, at 9 A. M., and again on Tuesday, September 20, 1892, at 9 A. M. No examinations will be held between these dates, but delayed examinations may be held after the beginning of the

Fall term, for the accommodation of students who, for good reason, have been unable to attend at the regular time.

For the convenience of students residing at a distance, examinations will be held under the direction of authorized persons, at various points in and near the State, as need may require. The cities of Cheyenne, Wyo.; Denver, Pueblo, Trinidad, Leadville, Montrose, and Grand Junction, Colo.; and Las Vegas, N. M.; are points where such arrangements can readily be made, and others may be added if necessary. But students who desire examinations at these or other points should notify the President at least three weeks in advance of the time of the regular examination.

A prize of twenty-five dollars is offered for the best examination for admission to the Freshman class.

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## ADMISSION TO ADVANCED STANDING.

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Students will be received into advanced classes on examination in the studies of the preceding years. The Faculty may, at their discretion, receive certificates from other colleges or schools as evidence that the student has satisfactorily pursued these or equivalent studies.

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## COURSES OF STUDY.

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Two courses of study are offered in the College. One, leading to the degree of Bachelor of Arts, corresponds to the courses of the best Eastern colleges leading to the same degree. The other, leading to the degree of Bachelor of Philosophy, includes less Latin and no Greek, but is more complete in Natural Science and Modern Languages.

The following is a tabular view of the two courses of study, the figures after each subject indicating the number of recitations or lectures per week:

COURSE LEADING TO THE DEGREE  
OF BACHELOR OF ARTS.

*Freshman Class.*

Greek .....	3
Latin .....	4
Mathematics .....	4
German .....	4
English .....	2

*Sophomore Class.*

Greek .....	4
Latin .....	3
Chemistry .....	4
Mathematics; Mechanics.....	4
English.....	2

*Junior Class.*

Physics .....	4
Psychology; Logic.....	4
Political Economy.....	2
Elective.....	7

*Senior Class.*

History of Philosophy; Ethics..	4
Astronomy, (first half-year)....	4
Elective, (first half-year).....	8
Elective, (second half-year)....	12

COURSE LEADING TO THE DEGREE  
OF BACHELOR OF PHILOSOPHY.

*Freshman Class.*

Biology.....	3
Latin .....	4
Mathematics .....	4
French or German.....	4
English .....	2

*Sophomore Class.*

Chemistry.....	4
Biology or Geology.....	3
French or German.....	4
Mathematics; Mechanics.....	4
English .....	2

*Junior Class.*

Physics.....	4
Psychology; Logic.....	4
Political Economy.....	2
Elective.....	7

*Senior Class.*

History of Philosophy; Ethics..	4
Astronomy, (first half-year)....	4
Elective, (first half-year).....	8
Elective, (second half-year)....	12

ELECTIVES—OPEN TO JUNIORS.

English Constitutional History, (first half-year).....	4
American Political History, 1783 to 1807, (second half-year) .....	2
Political Economy, (second half-year).....	*2
Latin .....	2
Greek.....	2
German .....	2
French.....	2
Chemistry.....	4
Mineralogy.....	4

\*In addition to the required two hours of Political Economy.

Geology.....	3
Calculus.....	4
English.....	2
Anglo-Saxon.....	2

---

### ELECTIVES—OPEN TO SENIORS.

English Constitutional History, (first half-year,).....	4
American Political History, 1783 to 1807, (second half-year,) .....	2
Political Economy, (second half-year,).....	2
Latin.....	2
Greek.....	2
German.....	2
French.....	2
Physics.....	2
Chemistry, Qualitative and Quantitative Analysis.....	5
Geology.....	3
Mathematics.....	4
English.....	2
Anglo-Saxon.....	2

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A student in either of the courses is usually permitted, further, to take as an elective any required study of the other course that is not required in his own.

In alternate years other courses in Political Economy, Government, and American Political History are given. See page 24.

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### PHILOSOPHY.

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Philosophy is a required study in the Junior and Senior years. The courses are all given by President Slocum.

I. *Psychology*—Dewey's *Psychology*. Recitations, theses, and lectures three hours a week, the first half of Junior year.

The lectures and the discussions which follow them are made a prominent feature of this course. Students are also required to do outside reading.

II. *Logic*—Jevons' *Lessons in Logic*. Recitations and lectures three hours a week the second half of Junior year.

The aim of this course is to give to students who have already taken the course in Psychology, (1) a thorough acquaintance with Elementary Logic; and, (2) a clear understanding of the relation which the different departments of philosophic study bear to each other.

III. *History of Philosophy*—Schwegler's History of Philosophy (translation). Recitations, theses, and lectures three hours a week the first half of Senior year.

This course traces the history of philosophic thought from the earliest beginnings down to the present day. The text book serves as a foundation for the work, which is further developed by means of lectures and a study of special topics.

IV. *Ethics*—Janet's Theory of Morals three hours a week, during the second half of Senior year.

In this course a series of lectures upon the principles of Ethics is given, and discussions are held upon the different ethical systems. Outside reading in special lines is required.

V. *Seminary Courses*—

(a) Psychological Seminary. The leading topics in Modern Psychology.

One hour a week during the Junior year. Theses and discussions.

The students are assigned special topics for research in the beginning of the year, and are directed in the courses of reading necessary for the preparation of theses upon them.

(b) Seminary in the History of Philosophy, and in Ethics.

One hour a week during Senior year. Theses and discussions.

(1) Study of the schools of philosophic thought, and of the leading men in each school. (2) A special study of Evolution, and (3) of Sociological problems.

---

## GREEK.

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The studies in this department extend through three years, of which the first two are required of all candidates



for the degree of Bachelor of Arts, while the work of the Junior year is elective.

The course is so arranged as to give the student an introduction to the several great departments of Greek Literature; and each author is studied from the literary as well as from the linguistic side. Particular care is taken to have the student acquire facility in reading Greek, and great stress is laid on reading at sight, throughout the course. At the same time, accuracy is insisted on, and the student is required to translate into idiomatic English.

Greek prose composition and Greek syntax are taught in connection with the authors read, and are intended to be illustrative of them. Exercises consisting of connected discourse, based upon the Greek text read, are used for translation into Greek, and selected passages are made the basis of syntactical drill, while occasional talks on grammatical topics largely supersede grammar lessons.

The first half of the Freshman year is devoted to the study of Homer, carrying on and concluding the work begun in the Academy. The Phæacian episode of the *Odyssey* is read, and extracts are made from other portions of the poem. Lectures by the Professor of Greek discuss the Homeric poems and their position in literature, and illustrative readings are given.

In the second half-year, the *Apology* and *Crito*, or the *Phædo* of Plato, and select orations of Lysias, are read. The study of these authors is accompanied by a grammatical review and by syntactical exercises; and they serve also to illustrate Attic life and Attic law.

In the Sophomore year, the work centres in the Greek Drama. The *Prometheus* of *Æschylus*, the *Antigone* of *Sophocles*, and the *Iphigenia Taurica* of *Euripides* are carefully read, and the work is supplemented by lectures on the drama, with readings from other plays of the three great masters. At the close of the year, the *De Corona* of *Demosthenes* is read and the political history of the period studied

The elective courses for the Junior year are as follows:

FIRST HALF-YEAR.—Hellenistic Greek: The Gospel according to Mark, and selections from Lucian.

SECOND HALF-YEAR.—(1) Herodotus and Thucydides, or (2) Greek Lyric Poetry.

During the first half-year, weekly lectures are offered on Greek Literature; during the second half-year, on Greek Art and Archæology.

Should students electing Greek desire it, a special course will be arranged for those who expect to teach the language.

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## LATIN.

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The course in Latin is intended to give (1) a good reading knowledge of the language, (2) a fair acquaintance with Roman literature, history, and antiquities. Instruction is given mainly by recitations, but such work is supplemented by occasional lectures by the instructor. Considerable time is given to reading at sight and to Latin prose composition. The use of idiomatic English in translating is strenuously insisted upon, and written translations are frequently required.

In 1892-93, the first half of the Freshman year will be devoted to Livy, Bk. XXII, and Cicero, *de Senectute*; the second half to Cicero, *de Amicitia*, and selected Odes of Horace.

In the first half of the Sophomore year, selected Letters of Cicero (Tyrrell's ed.) will be read; in the second half, Terence, *Adelphoe* and *Phormio*, and Plautus, *Menaechmi* and *Trinummus*.

The following elective courses are offered to Juniors and Seniors:

FIRST HALF-YEAR.—(1) The Roman Elegiac Poets, or (2) The principal Satires of Juvenal, with selected Epigrams of Martial.

SECOND HALF-YEAR.—(1) Cicero, *de Legibus*, or (2) The Annals of Tacitus, Bks. I-VI.

## ENGLISH.

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In the Freshman year, selected essays form a basis for the study of prose literature and rhetorical analysis; and as a guide for this work, Minto's Manual of English Prose Literature is used. Four plays of Shakespeare are also studied, and much collateral reading is done in connection with the required work in composition. The latter part of the year will be largely given to the study of the History of English and American Literature, followed in a text-book and by lectures.

In the Sophomore year, much attention will be given to argumentative discourse, dissertation, and oration. Sweet's Anglo-Saxon Primer and selections from early English are studied during the last three months of the second term.

An elective course is offered for the Junior and Senior years. The course consists of lectures on the masterpieces in English, and a historical study of Literature from 1688 to the present time.

An elective in Anglo-Saxon is also offered to Juniors and Seniors. Careful attention will be given to the study of the earliest period of our literature and to the historical development of the language.

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## GERMAN AND FRENCH.

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The object of these courses is to make ready and appreciative readers of the languages, and also to furnish a basis on which a speaking knowledge of them may be rapidly acquired. As far as possible, the language studied will be the medium of instruction in the class-room. Attention is given to correct writing, the study of idioms and synonyms, translation from English, original composition in each language, and to the study of its literature.

All students are required to take one year each of German and French before completing their course. In the Junior and Senior years, there are electives in the classical and

scientific literatures of both German and French, where conversation is made a special feature.

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## COURSES OF INSTRUCTION FOR 1892-93.

### GERMAN.

*Freshman Class.*—(Four hours a week.)—Harris' Prose Composition; Schiller's Wilhelm Tell; Freytag's Die Journalisten; Hillern's Hoeher als die Kirche.

*Elective Course.*—(Two hours a week.)—Harris' Prose Composition; German Conversation; Lessing's Minna von Barnhelm; Goethe's Egmont; Andersen's Bilderbuch ohne Bilder.

### FRENCH.

*First Year.*—(Four hours a week.)—Bocher's Otto's French Grammar; Sauveur's Causeries avec mes Elèves; Petit Robinson de Paris; La Joie Fait Peur.

*Second Year.*—(Four hours a week.)—Blouet's French Composition; Paul et Virginie; Les Dois de Fée; Moliere's L'Avare; Racine's Athalie.

*Elective Course.*—(Two hours a week.)—Blouet's French Composition; French Conversation; La Bataille de Dames; Voltaire's Charles XII; Moliere's Les Femmes Savantes.

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## MATHEMATICS AND ASTRONOMY.

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After the completion of elementary Geometry (solid and spherical) the Freshman year is devoted to the study of plane and spherical Trigonometry, and to advanced Algebra. The topics under the latter head which receive special attention, are Series (including the Binomial Formula), Logarithms, and Numerical Higher Equations. In the Sophomore year, the Conic Sections are studied by the method of Analytical Geometry. This completes the required course in pure mathematics. The Calculus is an optional study of the Junior year; and applications to mathematical physics

or astronomy may be made in the Senior year, if the student so elect. A term's work may also be given to the Modern Geometry (Geometry of Position). Astronomy is a required study in one term of the Senior year, and Professor Young's General Astronomy is used as a text-book.

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## PHYSICS.

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A course in Physics, extending through one year, is required of all regular members of the Junior class. The aim always kept in view is not only to give students a theoretical knowledge of the subject, but also to offer them facilities for laboratory practice and acquiring skill in experimentation. The practical work for this class consists almost entirely of measurements.

The course, as given this year, includes Heat, Light, Sound, and Electricity. The more advanced parts of these subjects are taught by lectures, in which the effort is made to embody all important discoveries of recent date, so far as they can be grasped by students of this grade of advancement. With a view to reduce somewhat the time taken up by lectures, students are required to review the elements of the subject on hand from a text-book. Jones' Heat, Light, and Sound, and Cumming's Electricity Treated Experimentally, are the works now in use. Garnett's Elementary Treatise on Heat and Cumming's Electricity (third edition) have been determined upon as text-books for next year.

Elective courses in Physics are offered to members of the Senior class.

Since the publication of the last Bulletin of the College, several new pieces of apparatus have been purchased, while others have been made in the laboratory.

The meteorological instruments belonging to the College were recently put in the custody of the Physical Department. Observations are taken regularly, and daily weather reports are furnished to the press. The following instruments are now in use: Green's barometer, Draper's barograph, Richards'



thermograph, Pickering's sunshine recorder, an anemometer, psychrometer, rain-gauge, and maximum and minimum thermometers.

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## HISTORY.

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The Constitutional and Political History of England from 1485 to 1702, with a short review of two centuries before, is an elective course for Seniors and Juniors in the first half-year; four hours weekly.

Political History of the United States from 1807 to 1861 is a four-hour elective course, for one half-year, open to Seniors and Juniors; given every second year, and omitted in 1892-3. Its substitute in the alternate years, a similar two-hour course upon the History from 1783 to 1807, will probably be given in the second half-year of 1892-3, but is offered subject to withdrawal.

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## ECONOMIC AND POLITICAL SCIENCE.

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The Juniors take a required course (two hours through the year) in Elementary Political Economy, using Mill as the text-book.

An elective course in Political Economy pursues selected subjects in detail. In 1891-2 the subjects are Money and Taxation; in 1892-3, probably the Rental-Tax, Socialism, and Railways. The course in 1892-3 will be two hours through the second half-year, open to Seniors and Juniors.

The elective courses upon Popular Government and European Governments, given in 1891-2, will be repeated in 1893-4.

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## ORATORY AND PARLIAMENTARY DEBATE.

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The aim of instruction in this department is the development of natural, graceful, and effective oratory; to make good speakers, and ready debaters. The training includes drill in



vocal gymnastics, distinct enunciation, and graceful gesture, together with the principles and resources of the art of elocution and the philosophy of expression. For a statement concerning the College rhetorical exercises and the prize oratorical and declamatory contests, see page 54.

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## BIOLOGY.

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### FIRST YEAR—GENERAL BIOLOGY.

*First Half-year.*—The object of this course is to give the student a clear conception of the fundamental Biological principles.

The lower forms of plant and animal life will be studied, such as Amœba, Infusoria, Hydra, Earthworm, Yeast, Mould, Spirogyra, etc.

*Second Half-year.*—Following the plan of the previous work, higher forms will be studied, such as Crayfish, Clam, Snail, Frog, Cat, etc.; Ferns and flowering plants.

The instruction will be given by lectures and laboratory work. The laboratory work is designed to supplement the lectures and to enable the student to examine for himself the facts discussed in the lecture.

*Text Books.*—Sedgwick and Wilson, General Biology; Huxley and Martin, Biology; also library consulted.

### SECOND YEAR—BOTANY.

I. Introduction.—Consideration of principles of vegetable physiology and anatomy.

II. Study of Types.—Study of the life history of representatives of the plant groups, from the lowest to the highest.

III. Systematic Work.—Exercise in the determination of species throughout the work, with drawings and diagrams of objects studied.

*\*Text Books*—Cryptogamic Botany, Bennett and Murray; Physiological Botany, Goodale.

De Bary, Goebel, Sachs, and others, consulted in the library.

## THIRD YEAR—ZOOLOGY.

I. Anatomy of Invertebrates.—Beginning with unicellular organisms, a familiar example of each of the various plans of invertebrate structure is studied in detail, the examination of a typical form being followed by a rapid survey of the common allied animals.

II. Anatomy and Physiology of Vertebrates.—Illustrative laboratory work with preparation of permanent specimens.

The general plan of the first half-year will be followed.

*Text Books.*—Text Book of Zoology, Claus and Sedgwick.  
Library consulted.

## FOURTH YEAR.

*First Half-year.*—Embryology. (Balfour and Foster, Haddon, Gegenbauer.)

*Second Half-year.*—Comparative Anatomy. (Wiedersheim.)

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CHEMISTRY.

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(REQUIRED WORK.)

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The course is intended to give a general knowledge of the subject of Chemistry. Recitations and lectures are employed as occasion may require for the purposes of instruction; and work in the laboratory, systematically and constantly followed, is required of each student, to insure a practical familiarity with the substances and processes examined. The hours of laboratory work are regarded as a part of the study of the subject, and are not therefore noted on the schedule of recitations. They number not less than the hours of recitation, and are observed under the supervision of the instructor. The experimental work of the students is designed to inculcate habits of close observation and scientifically accurate methods of experiment and inquiry. The principles of Chemistry, its practical application in the arts, and its use in the explanation of the

phenomena of daily life, are brought prominently forward in the course, but the student is also trained to obtain readily from technical works the data and details familiar only to the professional chemist. Special series of experiments will, from time to time, be required; and written reports upon the work must be handed in. The preparation of abstracts from books on Chemical Technology and Sanitary Science will occasionally take the place of the general work. The subject is so presented as to form a basis for the scientific studies of Junior and Senior years.

#### ADVANCED COURSES—(ELECTIVE).

The following courses have been arranged for students who prefer to continue the chemical work of the Sophomore year:

(a) *General and Applied Chemistry*.—This course follows, in the main, the outlines of the work of the required course. Theoretical Chemistry is much more fully treated, and more elaborate and delicate experiments are arranged to illustrate and explain general laws. The more recent advances, both in theoretical and applied chemistry, are noted and discussed in connection with the various elements, or groups, under consideration. The applications of chemistry to the arts are studied in greater detail, and the modern uses of chemistry in the sciences of Biology, Medicine, Geology, etc., are treated as fully as the length of the course will permit. Instruction is given mainly by lectures, but references are freely made to the works of Remsen, Fownes, Roscoe and Schorlemmer, etc., for particular subjects. Certain works on Sanitary Science are assigned for private study and the preparation of abstracts and written discussions. In lieu of the usual preparation of lessons for recitation, students are required to perform in the laboratory the experiments given in the lectures, and such others, in addition, as may be outlined for practice. The hours of lecture and recitation are four per week, continued for one year. The hours required for laboratory work are six per week for the same period.

(b) *Qualitative Chemical Analysis*.—This course is open only to students who, by previous study of General Chemistry, are properly qualified for the work. The time occupied by the course is the first term of the year, and the hours required for laboratory work are two consecutive hours, five days per week. The lectures will be given at such hours and at such intervals as shall be best suited to the class. A text book for reference and study will be assigned at the beginning of the term. The work of the course comprises experimental drill in obtaining characteristic reactions of the more common elements, study of empirical formulæ and symbolic expression of reactions, solution of substances, separation of groups of elements, and finally, analysis—first, of simple salts, and later of complex mixtures. The analytical work is confined almost wholly to inorganic substances, but includes certain common organic acids and a few organic bodies of general and medicinal use. The final examination is both experimental and theoretical in character.

(c) *Quantitative Chemical Analysis*.—The course in Quantitative Analysis presupposes a knowledge of General Chemistry and Qualitative Analysis. In it are included, the volumetric measurement of liquids, the accurate use of fine balances, and the general subject of stoichiometry. In the earlier part of the course, the student is made familiar with gravimetric and volumetric determinations of single elements by approved methods. Complete analyses of simple salts follow next in order. Salts, alloys, minerals, ores, slags, and mineral water are among the substances comprising the list required to be analyzed by the student. The analysis of inorganic substances only, is studied in this course. As a final part of his work in the course, the student is given practice in a few of the commercial or rapid determinations of the constituents of ores and minerals.

The course occupies the last term of the year for its completion. The laboratory work occupies two consecutive hours, five days per week. Lectures will be given at intervals throughout the course. The text-book for this year will be *Quantitative Analysis*, by Cairns.

## DEPOSITS, CHEMICALS, SUPPLIES, ETC.

The cost of chemicals, glassware, and supplies used by students, in any of the courses mentioned, must be defrayed by themselves. A deposit, estimated as probably sufficient to cover the ordinary expenses of the work, must be made by each student with the instructor, at the beginning of the term. Any balance remaining will be returned at the completion of the course. Glassware and general supplies (but not chemicals), if in condition for reissue, may be returned, subject to a small discount. The deposit required for each course is as follows:

General Chemistry—Preparatory course .....	\$2 00
General Chemistry—Sophomore year.....	3 00
General Chemistry—Elective course.....	10 00
Qualitative Analysis—Elective course.....	15 00
Quantitative Analysis—Elective course.....	15 00

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GEOLOGY.

The study of Geology is taken up by students in both the A. B. and Ph. B. courses, as an elective in the Senior year. Four hours per week, throughout the year, are devoted to the work.

The lectures and recitations are supplemented by field work and excursions to points of geological interest in the vicinity of the College. An important consideration in laying out the course in Geology has been the desire to inculcate the habit of close and accurate observation, and of logical and practical deduction from the phenomena brought to notice. It is sought to show the history of the Earth and the development of its flora and fauna from the evidences presented in the rocks themselves. The theories of evolution and development receive attention in connection with the work in Palæontology. The treatment of Economic Geology is made relatively full, because of the proximity of mining and metallurgical operations.



The study of Geology is peculiarly attractive and practical in this section of the State. In few localities can be found exposures of so many and varied strata of different geological ages. The region about Pike's Peak is particularly rich in the number and excellence of both rare and common minerals produced. Fossils are abundant at many points, and the older and later rock formations are often found in close proximity. The work of the course includes the practical study of Lithology with the preparation of rock-sections on the lithological lathe. The lithological microscope opens to the student the most modern lines of investigation into the nature of rocks.

The character of the region about the College is well adapted to illustrate Dynamical Geology. Faults, veins, dikes, water-erosion, sand-carving and glacial action can be found near at hand. A good selection of lantern slides enables the instructor to add to the natural illustrations of the surrounding district, the evidences collected from many other favored localities.

The text-book for the year will be *Elements of Geology*, by LeConte, edition of 1891.

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#### DETERMINATIVE MINERALOGY AND BLOWPIPING.

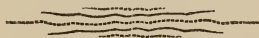
This course is offered as an elective in the Junior year. It is recommended to students who purpose taking the Geology of the Senior year. The instruction includes: Use of the blowpipe; reactions of common elements with fluxes; colorations of flame; reactions on charcoal; examinations in open and closed tubes, etc. Following these elementary steps, the determination of elements and certain radicals in compounds and mixtures, is taken up. The analysis and determination of common minerals occupies a large portion of the course. As a concluding work is given the blowpipe assay of ores of silver, gold, copper, and lead. To students, engineers, physicians, and others interested in scientific pursuits, the blowpipe is frequently an indispensable adjunct. Its correct and easy use often rapidly and surely clears away



uncertainties, and proves of great value. To collectors of minerals, and to geologists, it must always be an important assistant. The vicinity of the College is unusually rich in mineralogical specimens.

The text-book used is Cornwall's Manual of Blowpipe Analysis, etc.

The work required occupies two consecutive hours, four times per week throughout the first term of the year. The examination is entirely experimental.





*THE CUTLER ACADEMY.*



## THE CUTLER ACADEMY.

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This fitting-school, named in honor of one of the most generous and steadfast friends of Colorado College (Henry Cutler, of Massachusetts), provides a thorough preparation either for our own or any college in the United States. While the preparatory training is the principal aim, the plan of study is so arranged as to meet the requirements of students who do not propose going on into college work. The course is a thorough one, embracing four years, and the teaching is carefully conducted, by experienced instructors, most of them the same who are employed in the college. Correspondence concerning the Cutler Academy should be addressed to Augustus T. Murray, Assistant Principal.

## FACULTY.

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WILLIAM FREDERICK SLOCUM, JR.,  
*Principal.*

AUGUSTUS T. MURRAY, *Greek,*  
*Assistant Principal.*

FLORIAN CAJORI, *Physics.*

DOUGLAS J. CARNEGIE, *Physics.*

FREDERIC A. CHAPMAN, *Elocution.*

WILLIAM M. HALL, *History.*

FRANK H. LOUD, *Mathematics.*

WILFRED P. MUSTARD, *Latin.*

MARION MCGREGOR NOYES, *Latin.*

WILLIAM STRIEBY, *Chemistry.*

MARTHA P. VALENTINE, *French and German.*

ELOISE WICKARD, *English.*



## REQUIREMENTS FOR ADMISSION.

Candidates for admission to the Cutler Academy are expected to have finished the eighth grammar grade in the public schools, or otherwise to have pursued a similar course, and at the discretion of the Faculty certificates for this work may be received. The examinations for entrance cover the subjects of Arithmetic, English Grammar, Spelling, and Geography, none of which are included in the courses of the Academy.

## COURSES OF STUDY.

The figures after each subject indicate the number of recitations per week.

CLASSICAL COURSE.		CLASSICAL COURSE.	
<i>First Year.</i>		<i>Third Year.</i>	
Latin .....	5	Latin .....	5
Algebra.....	5	Greek .....	5
English .....	3	English .....	2
<i>Second Year.</i>		Algebra and Geometry.....	2
Latin .....	4	<i>Fourth Year.</i>	
Greek.....	4	Latin .....	3
English .....	2	Greek.....	3
Geometry .....	3	English .....	2
		German.....	4
		Algebra and Geometry.....	2
LATIN-SCIENTIFIC COURSE.		SCIENTIFIC COURSE.*	
<i>First Year.</i>		<i>First Year.</i>	
Latin .....	5	Latin .....	5
Algebra.....	5	Algebra.....	5
English .....	3	English .....	3

\*A Scientific course in the College, including no Latin and more Mathematics, Physical Science and Modern Languages than the Latin-Scientific College course does, will be open in 1895 to the first graduating class of the Scientific course in Cutler Academy.

## LATIN-SCIENTIFIC COURSE.

*Second Year.*

Latin .....	4
English .....	2
Physiology (first half-year) ....	4
Physiography (second half-year) 4	
Geometry .....	3

*Third Year.*

Latin .....	5
English .....	2
Physics .....	4
Algebra and Geometry .....	2
History (first half-year) .....	2
Drawing (second half-year) .....	2

*Fourth Year.*

Latin .....	3
English .....	2
German .....	4
Chemistry .....	4
Algebra and Geometry .....	2

## SCIENTIFIC COURSE.

*Second Year.*

Latin .....	4
English .....	2
Physiology (first half-year) ....	4
Physiography (second half-year) 4	
Geometry .....	3

*Third Year.*

English .....	2
French or German .....	4
Physics .....	4
Algebra and Geometry .....	3
History (first half-year) .....	2
Drawing (second half-year) .....	2

*Fourth Year.*

English .....	2
German .....	4
Chemistry .....	4
Freshman Mathematics .....	4

In order that the change of the Academy course from three years to four may not interrupt the continuity of the work of those students who entered before the change, the following schedule has been arranged, which concerns, of course, those students alone:

## FOR THE CLASS GRADUATING IN 1893.

IN 1892-3.

	CLASSICAL.		LATIN-SCIENTIFIC.	
	1ST. HALF.	2D. HALF.	1ST. HALF.	2D. HALF.
Latin .....	5	4	5	4
Greek .....	4	6*	.....	.....
English .....	2	2	2	2
Physics .....	4	3	4	3
German .....	.....	.....	4	4
History .....	.....	.....	.....	2

\* Includes one hour of Greek History.

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 FOR THE CLASS GRADUATING IN 1894.
 

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IN 1892-3.	CLASSICAL.		LATIN-SCIENTIFIC.	
	1ST. HALF.	2D. HALF.	1ST. HALF.	2D. HALF.
Latin.....	5	5	5	5
Greek.....	4	5	.....	.....
English.....	3	4	3	4
History.....	.....	.....	.....	2
Physiology.....	.....	.....	4	.....
Physiography.....	.....	.....	.....	4
Geometry.....	3	.....	3	.....

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 IN 1893-4.
 

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Latin.....	4	4	4	4
Greek.....	4	4	.....	.....
German.....	.....	.....	4	4
Algebra and Geometry.....	2	2	2	2
Physics.....	4	4	4	4

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 ENGLISH.
 

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The requirements conform to the preparatory course adopted by the Colorado State Teachers' Association, but is specially designed to prepare students for the Freshman year of Colorado College. In the first two years, Clark's Practical Rhetoric is the basis of work. In the last two years, Genung's Practical Rhetoric and Rhetorical Analysis are used as a basis for the study of English and American authors.

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 LATIN.
 

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Classes in Latin are formed in September, and the course of preparation for college occupies four years. In consequence of the recent change from a three years' course, the following special announcement is made for the year 1892-93:

The first class will spend the year on Collar and Daniell's Beginner's Latin Book, and Collar's Gate to Cæsar.

The second class will read Cæsar, *de bello Gallico* (beginning with Bk. II).

The third class, Cæsar, *de bello Gallico*, Bks. I and IV, and Cicero, in *Catilinam*, I, II, III, IV.

The fourth year is devoted mainly to the study of Vergil, but a part of the second term will be required for Cicero.

Special attention is given to Latin prose composition, which is taught mainly in connection with the reading of the Latin authors. Reading at sight is practised from the earliest possible moment, and continued to the end of the course. The use of idiomatic English in translating is insisted on from the beginning, and written translations are frequently required.

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## GREEK.

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The preparatory work in Greek extends over three years, and is intended to give a careful training in the elements of the language. Especial attention is given to reading, in order that the student may, as early as possible, obtain a certain command of the language itself—not merely of its grammatical forms. To this end, reading connected prose is introduced as soon as the most essential forms have been mastered. No beginning book is used, but simple passages for translation are prepared by the instructor, until the class is sufficiently advanced to take up Xenophon. Greek composition is taught in connection with the reading of Xenophon. Woodruff's Greek Prose Composition is the text-book used. Grammar and syntax are taught gradually as difficulties present themselves in reading; and frequent reviews secure thoroughness. Care is taken always that the student understands what he translates, and the use of idiomatic English in translating is insisted on.

Every effort is made from the outset to lead the student to regard the authors studied from a literary standpoint, and

to cultivate in him a love for the Greek language and for Greek Literature.

The work is arranged as follows:

*First Year*—Greek Grammar, Hadley-Allen; exercises in translation; Xenophon's Anabasis, Kelsey.

*Second Year*—Xenophon continued.

*Third Year*—Homer's Iliad, Seymour.

## GERMAN.

German is begun in the last year of the Academy. This course of study is as follows:

(Four hours a week.)—Cook's Otto's German Grammar; Grimm's Maerchen und Schiller's Der Taucher; Hauff's Der Zwerg Nase; Gutzkow's Zopf und Schwert.

## ELOCUTION.

For a description of the work done in this department, see pages 24 and 54.

## PHYSICS.

Elementary Physics is taught to students in the third year of the Academy course. The subject is approached by the inductive method. Great stress is laid upon laboratory practice, which constantly accompanies the text-book work. The apparatus for this course is ample, and students are made to perform nearly all experiments themselves. It is found that this objective method makes the subject more interesting to the pupil, gives him more valuable training, and impresses physical facts more deeply and lastingly upon his mind. The text-book in use this year is Gage's Elements of Physics.

## MATHEMATICS.

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The Mathematical course in the Academy begins with Algebra, as the student is expected to have completed Arithmetic before applying for admission.

In the first year, Algebra is carried through Radicals as far as the subject of Quadratic Equations.

In the second, Plane Geometry is studied, and the pupil, besides learning the proofs of demonstrated theorems, obtains exercise in inventing proofs for himself. In the later years of the course, both subjects are reviewed, and work in direct preparation for Freshman Mathematics is undertaken. The new scientific course, when its fourth year is reached, will comprise the Freshman Mathematics of the other two courses. The aim of the instruction is a thorough preparation for advanced work, by means of familiarity with the ground principles and correct habits of mathematical thought.

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## CHEMISTRY.

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The introduction to the study of Chemical Science is intended to be largely experimental in character. Students are required to repeat at their desks the experiments performed in the recitation by the instructor, and also to keep careful records of the phenomena observed during the work. The hours for laboratory work are not included in the schedule of recitations; they are regarded as a part of the necessary preparation of lessons, and are so arranged as not to conflict with other work. Desks, apparatus and supplies are furnished by the College, and a small fee is charged for the material used (see page 29).

The text-book for the year is Williams' Introduction to Chemical Science.

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## PHYSIOLOGY.

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The gross anatomy, physiology and hygiene of each system is studied in outline. Each subject is illustrated by



specimens or dissection. Special attention is given to practical deductions as to food, heating, exercise, ventilation, etc. Martin's Human Body, briefer course, is the text-book used.

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## HISTORY.

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The histories of Greece, Rome, and England are studied in the Academy with a view to making them supplement the studies in Greek, Latin, and English. Text-books are used in this study, more or less, but at present no announcement concerning them, for the coming year, can be made.





*CIRCULAR of INFORMATION.*



## LOCATION.

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The City of Colorado Springs is admirably adapted for a college town. At its very foundation plans were wisely laid, and the succeeding growth has maintained a most healthy character of morality and culture, to which has been added the element of wealth, increasing, since the construction of radiating railroad systems, at a brisk though not an abnormal rate. The result is a prosperous, wide-awake town, from which saloons and all attendant destructive influences are absent, having a population drawn from every section of the Union, as well as from England, and, in a slight degree, from other foreign countries; but, whether native or foreign, composed almost wholly of the better class of settlers; a town at present of about twelve thousand inhabitants, but with all the conveniences of a larger city—water-works, sewers, electric lights, electric street-railway, mail delivery, telephone communication north, south, and west. It is a noted health-resort, but has nothing of the air of a hospital. But while it possesses the attractions of a city, the lover of nature may seek far for a spot more favored. The mountains are close at hand, and their serrated line occupies about a third of the horizon. In their center stands Pike's Peak, a name familiar everywhere, to whose summit henceforth the traveler may ascend by carriage or railway-car, or by romantic bridle paths, remote from the thronged lines of summer travel. The climate has obtained a world-wide reputation. Its curative qualities consist largely in the opportunity for out-door exercise, afforded by the great number of fine days, to which the dryness and rarity of the air adds a quality exhilarating to all, and regarded as a specific in cases of malarial disease, asthma, and incipient phthisis. Students unable to work in other climates may here continue their studies, while at the same time making a permanent gain in health. This plan has been successfully carried out in a number of instances.

## SPECIAL STUDENTS.

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Special students will be received, at the discretion of the Faculty, into such classes as they are qualified to enter.

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## DEGREES AND HONORS AT GRADUATION.

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The College offers two degrees, those of Bachelor of Arts and Bachelor of Philosophy. These are intended to be of equal value, representing the same number of years of work. The degree of B. A., as will be seen by examination of the course of study, represents a proficiency in the "humanities" not inferior to that for which the same degree is given in the best known institutions of our country, while suitable recognition is made of the claims of the physical sciences. For the degree of Ph. B., a more extended study of these sciences is required, as well as some additional work in modern languages, while the study of Greek is omitted.

Special honorary mention is made at graduation of students who have shown particular merit in the work of any one or more of the principal departments of instruction.

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## LIBRARY.

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The library now embraces about eight thousand volumes and upward of a thousand pamphlets. All the government publications of the United States are regularly received, as issued. The Strettell collection, the gift of Arthur E. V. Strettell, contains a large number of standard literary works in French, besides other valuable books. Over a hundred volumes and pamphlets, relating to the civil war and slavery in the United States, were received as the bequest of Mrs. V. Pierson. The gift of about three hundred volumes from Mr. George H. Putnam, of New York, also deserves especial mention.



Two years ago the College received from Mr. J. J. Hagerman, of Colorado Springs, a complete set of the London edition (Valpy, 1819-30) of the Delphin classics, bound in 157 volumes. This rare and valuable work embraces the text of the principal Latin writers, with many of the notes and emendations of the best critics up to the time of its publication. Of more recent accessions, may be mentioned a number of miscellaneous books from Mr. Hagerman, and several useful historical works from Mr. J. C. Devin, of Ottumwa, Iowa.

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### READING ROOMS.

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In connection with the library is a reading room for the use of students and friends of the College, where the current magazines of literature and science, as well as a number of leading newspapers, may be consulted. The Young Men's Christian Association of the College has also a similar room in Hagerman Hall.

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### LABORATORIES AND APPARATUS.

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The laboratories of the College supply the means for thorough and practical training in the scientific branches of the curriculum.

The chemical laboratories are provided with all appliances necessary for extended experimental work by the students, and to some extent, also, for original investigation and experiment by the instructors. The assistant in chemistry has, for the past year, been largely occupied with the work of commercial chemical analysis, assaying, etc., which has been drawn to the institution by the excellent facilities afforded. The separate desks at which the students do their chemical work are provided with compartments, under lock, for individual apparatus and supplies, and have pneumatic troughs with city water, and sets of reagents on the shelves. In addition to other laboratory equipments, such as hoods for gases,

fine and ordinary balances, etc., the College keeps on hand a stock of general supplies, suited to the requirements of its courses.

Instruction in blowpiping and determinative mineralogy is conducted at working tables, which are provided with compartments, under lock and key, for the safe keeping of all blowpipe supplies. Each student is assigned to a position at the table, and provided with a separate compartment. Complete apparatus, peculiar to this study, is kept in stock, and is sold to students at cost.

The cabinets of the museum are well supplied with specimens illustrative of mineralogy and lithology. A lathe for cutting rock-sections, and a large collection of classified rock-section slides, to be used with the fine lithological microscope, open the way to the most modern research in this direction.

Biological and geological laboratories have recently been fitted up and equipped with compound microscopes and other needful apparatus. The College possesses an excellent herbarium, which includes an especially rich representation of the Rocky Mountain flora.

During the last two years many valuable additions have been made to the apparatus of the Physical laboratory. For details, see page 23.

The professor of Physics also has charge of the meteorological apparatus of the College, including a set of self-registering instruments, mostly of the patterns devised by Dr. Daniel Draper, which are valued at \$350. He has the direction of the regular weather observations, which have been maintained at the College (though not entirely without interruption) since the year 1878.

[The professor of Mathematics is at present under appointment as Special Agent of the U. S. Weather Bureau, and is charged with the preparation of an essay on the "Winds of the Plains."]

A fine stereopticon, operated with the calcium light, is used by all departments of the College in presenting those

topics which are suitable for pictorial illustration. About six hundred selected photographic views, covering many subjects, are now in the possession of the College.

An excellent set of surveying instruments—transit, plane-table, sextant, leveling rods, stadia rods, steel tapes, etc.—enables the class in surveying to gain important practical experience in this department.

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## COLLEGE RESIDENCES.

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There are two substantial stone buildings on the College grounds, planned with reference to the needs of students. They are warmed by steam, lighted by electricity, and have every desirable convenience.

At Hagerman Hall, which provides for young men, is a dining room that may accommodate one hundred and fifty students. Those who room out of the building can secure meals here at low rates.

Montgomery Hall, given by the Woman's Educational Society of Colorado College, is very attractive, and provides a thoroughly comfortable home for twenty-six young ladies. Board and room may be obtained at low prices.

---

## PHYSICAL TRAINING, EXERCISE AND ATHLETIC SPORTS.

---

A volunteer military company, formed by the students themselves, meets twice a week for drill. During the past year monthly competitions in drill and target-shooting have been held.

A large class of the young women of the College meets in the gymnasium twice a week for drill or calisthenics.

The gymnasium was erected last spring, and is being furnished as rapidly as possible with the apparatus for both the light and the heavy gymnastics.

Attendance upon the gymnasium is voluntary, but encouragement is given to a wise amount of interest in all athletic sports. There is a good football and baseball ground, and several excellent tennis courts within easy reach of the College.

The opportunities for walking, riding, and all out-of-door exercise, are unusually fine during all the year.

## COLORADO COLLEGE SCIENTIFIC SOCIETY.

The Colorado College Scientific Society holds monthly meetings in Palmer Hall. The objects of the society are: "The discussion of recent scientific results, the promotion among its members of scientific inquiry and investigation, and the publication of the more important papers read at its meetings." It was organized in January, 1890, and has already done some excellent work. Two annual publications, entitled "Colorado College Studies," have been issued, and a considerable number of exchanges from associations of like nature, including some foreign societies, has been secured. The attention which the "Studies" have received from scientific men everywhere, encourages the society to continue this publication. The third volume will appear in June. The list of articles printed in the first two volumes is as follows:

### FIRST ANNUAL PUBLICATION—

A Rigorous Elementary Proof of the Binomial Theorem—*F. H. Loud*.  
On Certain Cubic Curves—*F. H. Loud*.

A Study of the Inductive Theories of Bacon, Whewell, and Mill—  
*Benj. Ives Gilman*.

A Mathematical Text-Book of the Last Century—*F. Cajori*.

Horace, Od. III. 1. 34—*George L. Hendrickson*.

Quinti Ciceronis Commentariolum Petitionis XI, § 43. (B. et K. vol. IX, p. 487.)—*George L. Hendrickson*.

### SECOND ANNUAL PUBLICATION—

Witchcraft Among the Hindus—*Dr. H. W. Magoun*.

Protection of Congressional Minorities—*W. M. Hall*.

Pulsations in the Aortic Arches of the Earthworm—*Miss M. R. Mann*.

## SECOND ANNUAL PUBLICATION—Continued.

Dialectical Studies in West Virginia—*Dr. Sylvester Primer.*

The Study of Diophantine Analysis in the United States—*F. Cajori.*

The Elliptic Functions Defined Independently of the Calculus—*F. H. Loud.*

On Two Passages in the Crito—*Dr. H. W. Magoun.*

Calibration of Burettes—*D. J. Carnegie.*

On a Passage in the Frogs—*Dr. H. W. Magoun.*

Note on the Hadley-Allen Grammar—*Dr. H. W. Magoun.*

Historical Note on the Differentiation of a Logarithm—*F. Cajori.*

A Mathematical Error in the Century Dictionary—*F. Cajori.*

Students are encouraged to attend the meetings of the society.

The secretary of the society, to whom all correspondence, exchanges, etc., should be addressed, is Professor Florian Cajori.

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## STUDENTS' SOCIETIES.

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Associations, of both young men and young women, have been organized in the College, in affiliation with the College Christian Associations of the country, and are useful in promoting the fellowship of students in ways that harmonize with Christian aspiration and effort. A reading room is supported by the young men's association, lectures are given from time to time by various speakers, and religious meetings are held weekly.

The three literary societies of the College furnish opportunity for independent work and drill in public debate and parliamentary practice.

The Phoenix society is open to both men and women; the Apollonian admits men exclusively; the Minerva is composed wholly of young women.

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## MUSIC.

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It is hoped that arrangements will be made for the opening of a Musical Department at an early date. In the meantime, special rates have been obtained for College students from two of the leading voice and piano teachers in the city.



## PUBLIC LECTURES.

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The usual course of public lectures will be given this year during the months of April and May. Arrangements are almost completed, but a full list of speakers and topics can not yet be announced.

---

## PUBLIC SPEAKING.

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To familiarize the student with speaking before an audience, an hour is given up every third Friday to rhetorical exercises, at which all the students and the Faculty are present. At these exercises, the College students are required to deliver original orations, and the Academy classes selected recitations. Besides meeting the growing demand for accomplished readers and speakers in refined walks of life, lay and professional, the training here received is of the highest value to students intending to pursue legal or theological studies.

The work in the department of oratory and elocution is required from all students, except in special cases of impaired health. The mode of instruction being principally private drill and rehearsal, hours can be selected that do not conflict with other recitations.

The three literary societies of the College afford frequent opportunities for practice in debate, dramatic recitation, and speeches, as supplementary to the regular elocutionary training.

It will thus be seen that oratory occupies a prominent place in the curriculum of the College, and that unusual facilities are given students for the cultivation of this important gift.

---

## PRIZE ORATORICAL CONTEST.

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Two annual public prize-speaking contests are held: one given by the pupils of the Cutler Academy, the other by the

College students. Prizes are awarded to the first and second best in general oratorical ability, by a committee of judges selected by the contestants. The State Oratorical Association, made up of members chosen from the several colleges of the State of Colorado, holds an annual contest for the first place in oratory. The winner in this contest is in turn sent to represent the State Association in an Inter-State contest, which soon follows the State contest.

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## PECUNIARY AID.

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### SCHOLARSHIPS.

The income of the following scholarships is devoted to the aid of worthy students who may need assistance in completing their course:

The Thomas Davee Scholarship of \$500, established by the late Mrs. T. V. D. Mitchell, of Maine.

The Rice Scholarship of \$700, established by the friends of the Rev. Charles B. Rice, of Danvers, Massachusetts.

The Currier Scholarship of \$1,000, founded by Hon. Warren Currier, of St. Louis.

Several other scholarships are annually received from various sources.

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## SELF-SUPPORT.

During the past year a number of students have been able to pay their way, wholly or in part, by work secured in various homes in the city.

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## COLLEGE BILLS.

The term bills are issued September 21, and February 13, and are payable immediately, unless special arrangements are made with the President.



Students leaving before the end of the term pay full tuition, except under very unusual circumstances.

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### EXPENSES.

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Tuition, per year.....	\$35 00
Matriculation fee .....	5 00
Library fee.....	3 00
Table board, in Hagerman Hall, per week.....	4 00
Rooms warmed and furnished, per week, from .....	\$1.00 to 2 00
Towels, bed-linen and blankets must be provided by the students.	
Expenses at Montgomery Hall, including light and heat, per week,	\$6 00

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### THE WOMAN'S EDUCATIONAL SOCIETY OF COLORADO COLLEGE

Was formed in April, 1889, by the ladies of Colorado Springs. The purpose of the society is "to give physical, intellectual, and spiritual aid to young women who are students in any department of Colorado College." It has now about one hundred and fifty members. The membership fees go to form a beneficiary fund, from which loans are to be made on the following conditions:

1st. Loans may be made to girls who have been in the College one term and are recommended by the Faculty as in every way deserving of such aid.

2d. No student shall be allowed to incur an indebtedness to the society of more than \$300.

3d. Students may receive loans without interest until their connection with the College ceases; after which their notes are to draw interest at four per cent.

The officers of the society for the current year, are:

*President*—Mrs. William F. Slocum.

*Secretary*—Mrs. William Strieby.

*Treasurer*—Miss Frances E. Lesslie.

*APPENDIX.*



# PREPARATORY COURSES OF STUDY

ADOPTED BY THE COLORADO STATE TEACHERS' ASSOCIATION.

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## CLASSICAL COURSE.

MATHEMATICS—Algebra, through Quadratics; Plane Geometry.

LATIN—Latin Lessons with Grammar; Cæsar's Commentaries, 4 books; Vergil's *Æneid*, 6 books; Cicero, 7 orations; Prose Composition.

GREEK—Greek Lessons with Grammar; Xenophon's *Anabasis*, 4 books; Homer's *Iliad*, 3 books; Prose Composition.

MODERN LANGUAGES—German or French, one year.

SCIENCE—Physics, one year.

HISTORY—General History.

ENGLISH—Equivalent of the requirements of the New England Association of Colleges.

## LATIN-SCIENTIFIC COURSE.

MATHEMATICS—Algebra, through Quadratics; Plane Geometry.

LATIN—Latin Lessons with Grammar, Cæsar's Commentaries, 4 books; Vergil's *Æneid*, 6 books; Cicero, 7 orations; Prose Composition.

MODERN LANGUAGES—German or French, one year.

SCIENCE—Physics, one year; Chemistry, one year; Biology, one year; (or Biology, one-half year, and Botany, one-half year; or Physiography, one-half year, and Geology, one-half year, alternative with one full year of Biology.)

HISTORY—General History.

ENGLISH—Equivalent of the requirements recommended by the New England Association of Colleges.

DRAWING—Free-hand and Mechanical.

## SCIENTIFIC COURSE.

MATHEMATICS—Algebra, through Quadratics; Plane Geometry; Plane Trigonometry, or Solid Geometry.

FOREIGN LANGUAGES—Three years of either Latin or German; or division of the three years between the two languages, as schools may prefer.

SCIENCE—Physics, one year; Chemistry, one year; Biology, one year; (or Biology, one-half year, and Botany, one-half year; or Physiography, one-half year, and Geology, one-half year, alternative with one full year of Biology.)

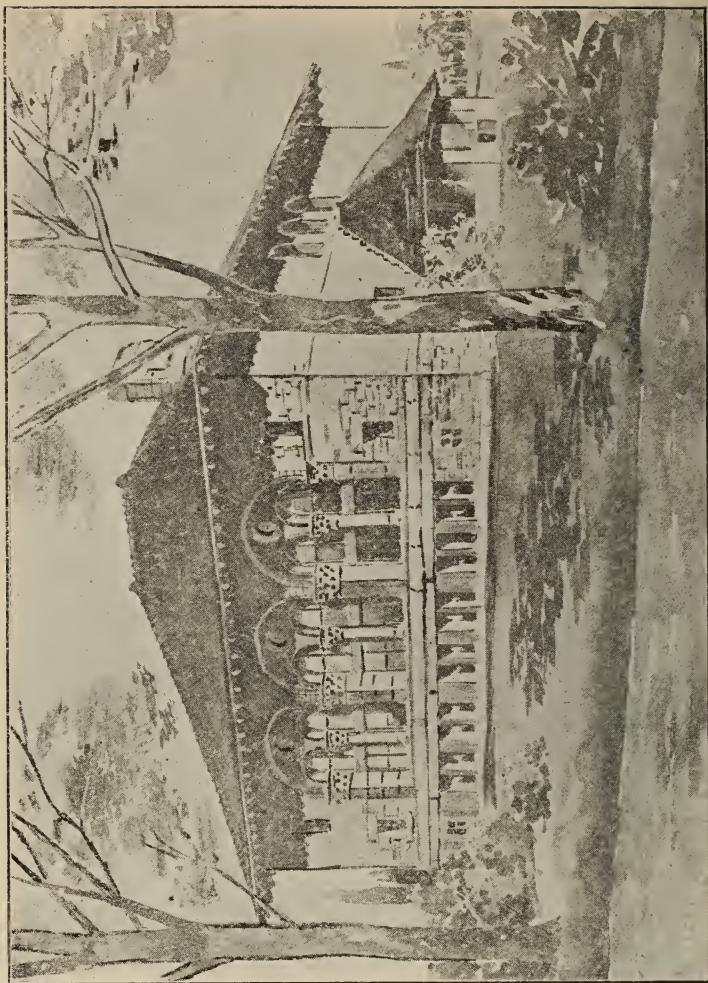
ENGLISH—Rhetoric, one year; and also the equivalent of the requirements of the New England Association of Colleges.

DRAWING—Free-hand and Mechanical.









NINETEENTH

ANNUAL BULLETIN

OF

COLORADO COLLEGE

AND

CUTLER ACADEMY

COLORADO SPRINGS, COLO.

APRIL, 1893.

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COLORADO SPRINGS:  
THE GAZETTE PRINTING COMPANY.  
1893.



MONTGOMERY HALL.

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HAGERMAN HALL.



## ANNOUNCEMENT.

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Colorado College is the oldest institution of its kind in the State, having been incorporated in 1874, while Colorado was still a Territory, and first opened in May of that year.

Its charter places it under the government of a self-perpetuating board of trustees.

The first president was the Rev. James G. Dougherty, elected in 1875. In the following year he was succeeded by the Rev. E. P. Tenney. In 1885 the office of president became vacant and so remained for three years—without interruption, however, of the work of the college. In the fall of 1888 William Frederick Slocum, Jr., took charge of the institution.

The first permanent building—the central stone structure, since enlarged and now known as “Palmer Hall”—was occupied in 1880. The stone dwelling which serves as the president’s residence was purchased by the trustees in 1888. “Hagerman Hall” was erected in 1889, and is a home for young men and such instructors as desire to make it their residence while connected with the college. Another stone building, on the college campus, completed in 1891, is named “Montgomery Hall,” and furnishes a home for young women who are students in the college. The gymnasium was built in 1891.

Mr. N. P. Coburn, of Newton, Massachusetts, has given \$50,000 for a library, and the beautiful building bearing his name will be completed during the coming academic year.

Dr. D. K. Pearsons, of Chicago, offers to give the trustees \$50,000, provided that an additional \$150,000 is given by other friends of the college during the next two years. One hundred thousand dollars is to be used for the erection and equipment of a science building, the rest for endowment. The importance of securing this gift is so great that the trustees are making a strong appeal to all friends of the college to help them in raising the necessary amount.

Mr. Henry R. Wolcott, of Denver, has given the College a telescope of five inches aperture, equatorially mounted on a tripod, and the sum of \$3,000 for an observatory.

It is the purpose of the trustees to surround the students with healthful moral and religious influences, without the limitations of sectarianism. They have enlarged the Faculty, and the courses of study have been so arranged that the same educational facilities are now offered in Colorado College as at the Eastern institutions of higher education. The attendance for the past year has been the largest in the history of the institution.

Attention is called to the Cutler Academy, the associated preparatory school, in which students are prepared for any American college.



## TRUSTEES OF THE COLLEGE.

---

WILLIAM F. SLOCUM, JR.,  
*President of the Board.*

DR. B. F. D. ADAMS.

GEORGE W. BAILEY.

W. P. BONBRIGHT.

JOHN CAMPBELL.

JOHN CURR.

HENRY CUTLER.

GEORGE DE LA VERGNE.

REV. JAMES B. GREGG, D. D.

J. J. HAGERMAN.

J. R. HANNA.

IRVING HOWBERT.

WILLIAM S. JACKSON.

F. L. MARTIN.

REV. RICHARD MONTAGUE, D. D.

GEORGE H. PARSONS.

REV. CHARLES B. RICE.

REV. LIVINGSTON L. TAYLOR.

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## EXECUTIVE COMMITTEE.

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J. J. HAGERMAN, *Chairman.*

GEORGE H. PARSONS, *Secretary.*

JOHN CURR.

WILLIAM S. JACKSON.

WILLIAM F. SLOCUM, JR.

---

J. H. BARLOW, *Treasurer of the College.*

## FACULTY.

WILLIAM FREDERICK SLOCUM, JR., B. A. (Amherst),  
*President and Professor of Philosophy.*

SUSAN ALMIRA BACON,  
*Instructor in French and German.*

FLORIAN CAJORI, M. S. (University of Wisconsin),  
*Professor of Physics.*

DOUGLAS J. CARNEGIE, M. A. (Cambridge, Eng.),  
*Associate Professor of Chemistry.*

FRANCIS WHITTEMORE CRAGIN, B. S. (Harvard),  
*Professor of Geology, Mineralogy and Paleontology.*

M. CLEMENT GILE, M. A. (Brown),  
*Professor of Greek.*

WILLIAM M. HALL, B. A. (Yale),  
*Professor of Political and Social Science.*

WILLIAM HENRY LAMB,  
*Assistant in the Chemical Laboratory.*

FRANK HERBERT LOUD, B. A. (Amherst),  
*Professor of Mathematics and Astronomy.*

REV. GEORGE NATHANIEL MARDEN,  
*Professor of History.*

WILFRED P. MUSTARD,  
 M. A. (University of Toronto), Ph. D. (Johns Hopkins University),  
*Professor of Latin.*

ATHERTON NOYES, B. A. (Yale),  
*Instructor in English.*

MARION MCGREGOR NOYES,  
*Instructor in Philosophy, and President's Assistant.*

EDWARD S. PARSONS, M. A. (Amherst), B. D. (Yale),  
*Professor of English.*

WILLIAM STRIEBY, M. A. (University of the City of New York),  
 E. M. (Columbia College School of Mines),  
*Professor of Chemistry and Metallurgy.*

J. FOSTER TUCKER, B. A. (University of Kansas),  
*Instructor in Physical Culture and Oratory.*

AUGUSTUS G. UPTON, M. A. (Oberlin College),  
*Librarian.*

LECTURERS BEFORE THE SENIOR AND JUNIOR CLASSES:

J. T. ESKRIDGE, M. D.,  
*Localization of Brain Functions and Hypnotism.*

H. C. CROUCH, M. D.,  
*Finer Structure of the Brain and Nervous System.*

REV. JAMES B. GREGG, D. D.,  
*The Ethical Teaching of the Old Testament.*

REV. RICHARD MONTAGUE, D. D.,  
*Christian Ethics.*

F. R. HASTINGS, M. A.,  
*Modern Philosophy.*

*Lady in charge at Hagerman Hall,*  
 MISS FRANCES E. LESSLIE.

*Lady in charge at Montgomery Hall,*  
 MRS. EDWARD WOOLSEY BACON.

## CALENDAR.

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1893.

June 6....Tuesday..... } Second semi-annual examinations begin.  
    } First entrance examinations.  
 June 11....Sunday..... Baccalaureate sermon.  
 June 12....Monday..... College oratorical contest.  
 June 13....Tuesday..... Cutler Academy graduation exercises.  
 June 14....Wednesday.... Commencement exercises.

---

Sept. 19....Tuesday..... Second entrance examinations.  
 Sept. 20....Wednesday.... First half-year begins at 8:30 A. M.  
 Nov. 30....Thursday..... } Thanksgiving recess.  
 Dec. 1....Friday..... }  
 Dec. 20....Wednesday.... Christmas recess begins at 1 P. M.

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1894.

Jan. 4....Thursday..... Christmas recess ends at 8:30 A. M.  
 Jan. 25....Thursday..... Day of prayer for Colleges.  
 Feb. 2....Friday..... First semi-annual examinations begin.  
 Feb. 12....Monday..... Second half-year begins at 8:30 A. M.  
 Feb. 22....Thursday..... Washington's birthday.  
 Mar. 21....Wednesday.... Easter recess begins at 1 P. M.  
 Mar. 28....Wednesday.... Easter recess ends at 8:30 A. M.  
 June 5....Tuesday..... } Second semi-annual examinations begin.  
    } First entrance examinations.  
 June 10....Sunday..... Baccalaureate sermon.  
 June 11....Monday..... College oratorical contest.  
 June 12....Tuesday..... Cutler Academy graduation exercises.  
 June 13....Wednesday.... Commencement exercises.  
 Sept. 18....Tuesday..... Second entrance examinations.

# REQUIREMENTS FOR ADMISSION

TO THE

## FRESHMAN CLASS

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS.

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### *Admission by Examination.*

1. IN GREEK.—(a) A thorough knowledge of inflection, with the use of the accents, and the ordinary grammatical constructions. (b) Four books of the *Anabasis*, or three books and Cook's *Selections* from the *Cyropædia*. (c) Three books of the *Iliad*, with prosody and dialectic forms. (d) Translation at sight of average passages from *Xenophon* and *Homer*. (e) The translation into Greek of a passage of connected discourse of moderate difficulty. (The first forty-four exercises in *Allinson's Greek Prose Composition* will indicate the nature of the work required.) (f) Such a brief general view of Greek history as is contained in the revised edition of *Pennell's History*.

2. IN LATIN.—(a) Grammar. Special stress will be laid upon an accurate and ready knowledge of grammatical forms. (b) *Cæsar*: *Gallie War*, Bks. I-IV. (c) *Cicero*: Seven orations. (d) *Vergil*: *Aeneid*, Bks. I-VI. (e) Translation at sight of easy passages from prose Latin. (f) Prose Composition. (g) An outline knowledge of the history of the Roman Republic.

3. IN ENGLISH.—The candidate will be required to write a short composition, which will be strictly judged from the standpoint of spelling, punctuation, grammar, division into paragraphs, and plan, upon a subject to be announced at the time of the examination. In 1893, the subject will be chosen from one of the following books, with all of which the applicant is expected to be familiar: *Shakespeare's Julius Cæsar* and *Twelfth Night*, *Scott's Marmion*, *Longfellow's Courtship of Miles Standish*, *Addison's Sir Roger de Coverley Papers*,

Macaulay's second Essay on the Earl of Chatham, Emerson's American Scholar, Irving's Sketch Book, Scott's Ivanhoe, Dickens' David Copperfield.

The examinations in other studies will also be judged from the standpoint of English. The books prescribed for the examinations in 1894 and 1895 are as follows :

*For 1894.*—Shakespeare's Julius Cæsar and Merchant of Venice, Scott's Lady of the Lake, Arnold's Sohrab and Rustum, Addison's Sir Roger de Coverley Papers, Macaulay's second Essay on the Earl of Chatham, Emerson's American Scholar, Irving's Sketch Book, Scott's Abbot, Dickens' David Copperfield.

*For 1895.*—Shakespeare's Merchant of Venice and Twelfth Night, Milton's L'Allegro, Il Penseroso, Comus and Lycidas, Longfellow's Evangeline, Addison's Sir Roger de Coverley Papers, Macaulay's Essays on Milton and Addison, Webster's first Bunker Hill Oration, Irving's Sketch Book, Scott's Abbot.

After 1893, the student applying for admission will be required to pass an examination in English grammar (Whitney's Essentials of Grammar indicates the field to be covered) and elementary Rhetoric, in addition to the above.

4. GERMAN OR FRENCH.—A good elementary knowledge of the language, such as is sufficient for reading easy prose at sight.

5. IN MATHEMATICS.—(a) Algebra, through simultaneous quadratic equations. (b) Elementary plane Geometry, or as much as is contained in the first five books of Wentworth's Geometry (revised edition).

[Candidates from schools where Greek is not taught, who have completed the preparation for the Bachelor of Philosophy division of the Freshman class, but prefer to follow the course for the degree of Bachelor of Arts, will be allowed to do so by taking Greek through the whole four years; but they are advised, instead, to diminish the requisite amount of work by substituting in their preparation a second year of German or French, and, if possible, the Freshman Latin or Mathematics, or both, for subjects which are not required for admission to the Bachelor of Arts division. If the Freshman Latin and Mathematics are not attainable in preparation, additional years of German and French will be useful through being credited as Junior electives.]

#### *Admission by Certificate.*

Candidates who offer satisfactory evidence of having completed the Classical preparatory course adopted by the Colorado State

Teachers' Association, will be admitted without condition into the Freshman class, in the course leading to the degree of Bachelor of Arts.

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## FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF PHILOSOPHY.

### *Admission by Examination.*

In Latin, English, German (or French) and Mathematics, the requirements are the same as for the course leading to the degree of Bachelor of Arts. Candidates for admission to this course need not offer Greek, in place of which they will be examined in the following subjects :

1. IN PHYSICS.—Gage's Elements of Physics, or an equivalent.
2. IN CHEMISTRY.—Williams' Introduction to Chemical Science, or an equivalent.
3. IN BOTANY.—Gray's Lessons (revised edition).
4. IN PHYSIOLOGY.—Martin's Briefer Course, or an equivalent.
5. IN AMERICAN HISTORY.—An outline knowledge of leading facts.

### *Admission by Certificate.*

Candidates who offer satisfactory evidence of having completed the Latin-Scientific preparatory course adopted by the Colorado State Teachers' Association, will be admitted without condition into the Freshman class, in the course leading to the degree of Bachelor of Philosophy.

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## ENTRANCE EXAMINATIONS.

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Examinations for admission to the College, and also to the Cutler Academy, will be held on Tuesday and Wednesday, June 6 and 7, 1893, and again on Tuesday and Wednesday, September 19 and 20, 1893, in each case beginning on Tuesday at 9 A. M. No examinations will be held between these dates, but delayed examinations may be held after the beginning of the Fall term, for the accommodation of students who, for good reason, have been unable to attend at the regular time.



For the accommodation of students residing at a distance, examinations will be held under the direction of authorized persons, at various points in and near the State, as need may require. The cities of Cheyenne, Wyo.; Denver, Pueblo, Trinidad, Leadville, Montrose, and Grand Junction, Colo.; and Las Vegas, N. M.; are points where such arrangements can readily be made, and others may be added if necessary. But students who desire examinations at these or other points should notify the President at least three weeks in advance of the time of the regular examination.

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#### ADMISSION TO ADVANCED STANDING.

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Students will be received into advanced classes on examination in the studies of the preceding years. The Faculty may, at their discretion, receive certificates from other colleges as evidence that the student has satisfactorily pursued these or equivalent studies.

The attention of students who propose to enter the Junior or Senior class, is called to the notice at the end of the Elective list (page 18), relative to early application for electives.

## COURSES OF STUDY.

Two courses of study are offered in the College. One, leading to the degree of Bachelor of Arts, corresponds to the courses leading to the same degree in the best Eastern colleges. The other, leading to the degree of Bachelor of Philosophy, includes less Latin and no Greek, but is more complete in Natural Science and Modern Languages.

The following statement shows the arrangement of each course, with the number of class exercises per week.

## BOTH DIVISIONS: FRESHMAN YEAR.

*Mathematics*.—4 hours through the year. First half-year—Solid Geometry and Algebra (Series, Logarithms, and Numerical Higher Equations). Second half-year—Plane and Spherical Trigonometry.

*German* or *French*.—4 hours through the year; a second year (Course B, see page 23) of whichever of these languages the student offered as part of his preparation for college.

*English*.—2 hours through the year; History of the English Language, and Rhetoric (Courses 1 and 2, page 21).

*Elocution*.—2 hours through the year; and declamations, as the instructor may require.

## A. B. DIVISION:

*Greek*.—3 hours through the year. First half-year—Selections from the *Odyssey*; reading at sight. Second half-year—Selections from *Lysias*; History of Greek Oratory; the *Apology* and *Crito*, or *Phaedo*, of Plato; reading at sight.

*Latin*.—4 hours through the year. First half-year—Livy, bk. xxii, and Cicero *de Senectute*; Latin Composition; reading at sight. Second half-year—Cicero *de Amicitia* and selected Odes of Horace; Latin Composition; reading at sight.

## PH. B. DIVISION:

*Latin*.—As in the A. B. Division; or, if the student so elects,

*French* or *German*.—4 hours through the year; Course A (see page 22) of whichever of these languages was not offered as part of the preparation for college.

*Biology*.—3 hours through the year; with additional laboratory practice, at the discretion of the instructor.

## SOPHOMORE YEAR.

## BOTH DIVISIONS:

*Mechanics and Mathematics.*—4 hours through the year. First half-year—Mechanics. Second half-year—Analytical Geometry, through Loci of the Second Order.

*English.*—2 hours through the year. First half-year—Rhetorical Study of Essays (Course 3, page 21). Second half-year—American Literature (Course 4, page 21). The writing and public delivery of one oration is required.

## A. B. DIVISION:

*Greek.*—4 hours through the year. First half-year—The Antigone of Sophocles; History of Greek Tragedy; Æschylus, Prometheus Bound. Second half-year—Euripides, Iphigenia Taurica; Demosthenes, De Corona; reading at sight.

*Latin.*—3 hours through the year. First half-year—Selected Letters of Pliny and the Fourth book of Vergil's Georgics; Latin Composition. Second half-year—The Second book of the Georgics and Cicero's Brutus; Latin Composition.

*Chemistry.*—8 hours through the year; partly laboratory work and partly recitation.

## PH. B. DIVISION:

*French or German.*—4 hours through the year. The student takes whichever of these two languages was not included in his preparation for college; Course A (see page 22) if he did not have it in Freshman year, otherwise Course B.

*Chemistry.*—9 hours through the year.

*Geology.*—4 hours through the year. LeConte's Elements of Geology; field excursions.

## JUNIOR YEAR.

## BOTH DIVISIONS:

*Logic and Psychology.*—4 hours through the year, including one seminary-hour. First ten weeks—Jevons' Lessons in Logic. Remainder of the year—James' Principles of Psychology; lectures and experiments. In the seminary, theses and discussions.

*Physics.*—4 hours through the year. Heat, Electricity, Magnetism, Light. Lectures, and experiments in Measurement (see page 25).

*Political Economy*.—2 hours through the year. Laughlin's Mill's Political Economy.

*English and Elocution*.—The writing and delivery of two orations.

*Elective Courses*.—Amounting to at least 7 hours through the year, chosen by the student from the list below.

#### BOTH DIVISIONS: SENIOR YEAR.

*History of Philosophy and Ethics*.—5 hours through the year, including one seminary-hour. First half-year—Schwegler's History of Philosophy, outside reading, and lectures. Second half-year—Janet's Theory of Morals, outside reading, and lectures. In the seminary of each course—theses and discussions.

*Astronomy*.—4 hours through the first half-year. Young's General Astronomy.

*English*.—The writing of two orations.

*Elocution*.—2 hours through the year, and the public delivery of two orations.

*Elective Courses*.—Amounting to at least 6 hours for the first half-year and 8 hours for the second half-year; chosen by the student from the list below.

#### ELECTIVE STUDIES.

(Unless otherwise stated, each course continues through the year, and is open to both Seniors and Juniors. Bracketed courses are omitted in 1893-4.)

Hours per week.

- 2 *Modern German Philosophy*, first half-year (page 20).
- 2 *The Philosophic Movement in England*, second half-year (p. 20).
- 2 *Advanced Logic*, second half-year (page 20).
- 4 *Calculus*, Differential and Integral (page 24).
- 4 *Projective Geometry*, second half-year (page 24).
- 4 *General and Applied Chemistry*; Sophomore Chemistry prerequisite (page 28).
- 4 *Chemical Analysis*; first half-year, Qualitative; second half-year, Quantitative (page 29).
- 2 *Applications of Electricity*, second half-year (page 27).
- 2 *Comparative Morphology of Vertebrata*, first half-year (p. 30).
- 3 *Zoology*, second half-year (page 31).
- 4 *Mineralogy*, second half-year (page 32).
- 3 *Economic Geology*, first half-year (page 32).

- 2 *Paleontology*, second half-year (page 32).
- 2 *Political Economy*, advanced; second half-year (page 27).
- 1 [*Popular Government*; one half-year.]
- 1 [*European Governments*; one half-year.]
- 4 *American Political History*, 1783 to 1837; first half-year (p. 27).
- 2 *American Political History*, 1837 to 1861; second half-year (p. 27).
- 4 [*English Political History*, 1485 to 1714; one half-year.]
- 3 *Junior English*; Courses 5 and 6, page 22.
- 3 *Senior English*; Courses 7 and 8, page 22; open to Seniors, and to Juniors at the discretion of the instructor.
- 2 *Greek History*: Herodotus and Thucydides; first half-year (p. 20).
- 2 *Aristophanes*: The Clouds; second half-year (page 20).
- 2 [*Pindar*, and History of Greek Lyric Poetry (page 20)].
- 2 { *Roman Elegiac Poets*; or } first half-year (page 21).
- 2 { *Juvenal and Martial*; }
- 2 { *Tacitus*; or } second half-year (page 21).
- 2 { *Terence and Plautus*; }
- 2 *French*, Course C, page 23; Courses A and B prerequisite.
- 2 *German*, Course C, page 23; Courses A and B prerequisite.

A student in either division is usually permitted, further, to take as an elective any required study of the other division that does not appear in the course required for his own degree. But for this purpose, French A counts as 2 hours only, German A as 3 hours.

Seniors and Juniors should mail their choice of electives to Professor W. M. Hall, Colorado Springs, in time to be received there not later than September 12, 1893. The hours for electives (other than Senior and Junior English, French C and German C, which are included in the schedule on page 34,) will then be assigned, and electives for which no application has been received may be withdrawn.

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## PHILOSOPHY.

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This course extends over the Junior and Senior years, and gives the student a knowledge of the development of thought in the several departments of Philosophy.

- 1. LOGIC.—Jevons' Elementary Lessons. Four hours.—MISS NOYES.
- 2. PSYCHOLOGY.—James' Principles of Psychology. Lectures, Recitations and Experiments. Three hours.—PRESIDENT SLOCUM.

### *Lectures:*

- (a) Introductory series.—PRESIDENT SLOCUM.
- (b) Psycho-physics.—PRESIDENT SLOCUM.

- (c) *Finer Structure of the Brain and Nervous System.*—  
DR. H. C. CROUCH.
- (d) *Localization of Brain Functions.*—DR. J. T. ESKRIDGE.
- (e) *Memory and Imagination.*—MISS NOYES.
- (f) *Hypnotism.*—DR. J. T. ESKRIDGE.

3. **PSYCHOLOGICAL SEMINARY.**—The leading subjects in Modern Psychology, Theses and Discussions. One hour.—PREST. SLOCUM.  
Students are assigned special subjects for research in the beginning of the year, and are directed in the courses of reading necessary for the preparation of theses.

4. **HISTORY OF PHILOSOPHY.**—Lectures and Recitations. Four hours.—PRESIDENT SLOCUM.

*Lectures:*

- (a) Study in Comparative Religions.
- (b) Greek Philosophy.
- (c) Scholasticism—Descartes, Spinoza, Leibnitz.
- (d) Locke, Berkeley, Hume.
- (e) Kant, Fichte, Schelling, Hegel, Lotze.
- (f) Spencer, Comte.

*Supplementary Lectures:*

- (a) Greek Philosophy. Twelve lectures.—PREST. SLOCUM.
- (b) Modern Philosophy. Six lectures.—MR. HASTINGS.

5. **METAPHYSICAL SEMINARY.** One hour.—PRESIDENT SLOCUM.

Presentation of papers and discussion of subjects incidental to the course in Speculative Philosophy.

6. **ETHICS.**—Janet's Theory of Morals. Lectures, Theses, and Discussions. Three hours.—PRESIDENT SLOCUM.

*Lectures:*

- (a) The Fundamental Principles of Ethics. Twelve lectures.—PRESIDENT SLOCUM.
- (b) The Ethical Teaching of the Old Testament. Three lectures.—REV. JAMES B. GREGG, D. D.
- (c) Christian Ethics. Three lectures.—REV. RICHARD MONTAGUE, D. D.

7. **ETHICAL SEMINARY.** One hour.—PRESIDENT SLOCUM.

Presentation of papers and discussions upon modern ethical and sociological problems.



## 8. ELECTIVE COURSES:

- (a) Modern German Philosophy. First half of Senior year. Two hours.—PRESIDENT SLOCUM.
  - (b) The Philosophical Movement in England. Second half of Senior year. Two hours.—PRESIDENT SLOCUM.
  - (c) Advanced Logic. Second half-year. Two hours.—MISS NOYES.
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## GREEK.

The studies in this department extend through four years, of which the first two are required of all candidates for the degree of Bachelor of Arts, while the work of the Junior and Senior years is elective.

The course is so arranged as to give the student an introduction to the several great departments of Greek Literature; and each author is studied from the literary as well as from the linguistic side. Particular care is taken to have the student acquire facility in reading Greek, and great stress is laid on reading at sight, throughout the course. At the same time, accuracy is insisted on, and the student is required to translate into idiomatic English.

## FRESHMAN YEAR.

- 1. *Homer*—Selections from the *Odyssey*; reading at sight. Three hours, first half-year.
- 2. *Lysias*—Selections; History of Greek Oratory. *Plato*—Apology and *Crito* or *Phædo*; reading at sight. Three hours, second half-year.

## SOPHOMORE YEAR.

- 3. *Sophocles*—*Antigone*; History of Greek Tragedy. *Æschylus*—*Prometheus Bound*. Four hours, first half-year.
- 4. *Euripides*—*Iphigenia Taurica*. *Demosthenes*, *De Corona*; reading at sight. Four hours, second half-year.

## ELECTIVE.

- 5. *Greek History*—*Herodotus* and *Thucydides*. Two hours, first half-year.
- 6. *Aristophanes*—*The Clouds*. Reading at sight. Supplementary reading from other works. Lectures. Two hours, first half-year.
- 7. *Pindar*—History of Greek Lyric Poetry. Supplementary reading from the lyric poets. Lectures. Two hours, second half-year. [This course will be omitted in 1893-94.]



## LATIN.

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The course in Latin is intended to give (1) a good reading knowledge of the language; (2) a fair acquaintance with Roman literature, history and antiquities. Instruction is given mainly by recitations, but such work is supplemented by occasional lectures by the instructor. Considerable time is given to reading at sight and to Latin prose composition. The use of idiomatic English in translating is strenuously insisted upon, and written translations are frequently required.

In 1893-94, the first half of the Freshman year will be devoted to Livy, Bk. XXII, and Cicero *de Senectute*; the second half, to Cicero *de Amicitia*, and selected Odes of Horace.

In the first half of the Sophomore year, selected letters of Pliny and the Fourth book of Vergil's *Georgics* will be read; in the second half, the Second book of the *Georgics* and Cicero's *Brutus*.

The following elective courses are offered to Juniors and Seniors:

FIRST HALF-YEAR.—(1) The Roman Elegiac Poets, or (2) The principal Satires of Juvenal, with selected Epigrams of Martial.

SECOND HALF-YEAR.—(1) The Annals of Tacitus, Bks. I-IV, or (2) Terence, *Andria*, and *Adelphoe*, and Plautus *Menæchmi* and *Captivi*.

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## ENGLISH.

The following courses are offered:

1. *History of the English Language*.—One half of the first half-year. Two hours a week. Required of Freshmen. Lounsbury's *History of the English Language*, Part I.

2. *Advanced Rhetoric*.—Essays. Remainder of the year. Two hours a week. Required of Freshmen. Genung's *Rhetoric and Rhetorical Analysis*.

3. *Rhetorical Study of Essays*.—Essays. One half-year. Two hours a week. Required of Sophomores. Cochrane's *The English Essayists*.

4. *American Literature*.—No text-book used. Authors studied: Irving, Hawthorne, Bryant, Longfellow, Emerson, Thoreau, Lowell, Holmes, Whittier. Each student writes an exhaustive essay on one author, for criticism by the class. One half-year. Two hours a week. Required of Sophomores.

5. *English Literature*.—From the Anglo-Saxon conquest to Milton, inclusive. No text-book used. The principal literature of the Anglo-Saxon and early English periods taken up rapidly, and Chaucer, Spenser, Bacon and Milton studied carefully. Each student writes an exhaustive essay on some subject in the course, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors.

6. *The Elizabethan Drama*.—Marlowe, Ben Jonson, Beaumont and Fletcher, Webster, studied with Thayer's Best Elizabethan Plays. The bulk of half-year devoted to Shakespeare. A number of his plays read rapidly; The Tempest, Richard II. and Macbeth critically. Each student writes an exhaustive essay on some subject in the course, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors.

7. *Anglo-Saxon*.—Two hours a week through the year. Elective for Juniors and Seniors. Sweet's Anglo-Saxon Primer. Selections from Anglo-Saxon Literature. [Omitted in 1893-4.]

8. *English Poetry*.—From Dryden to Wordsworth. No text-book used. Authors studied: Dryden, Pope, Thomson, Gray, Cowper, Burns, Scott, Byron, Moore, Shelly, Keats, Coleridge, Southey, Wordsworth. Each student writes an exhaustive essay on one author, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors.

9. *English Prose*.—From Bunyan to Sidney Smith. No text-book used. Authors studied: Bunyan, Addison, Swift, Goldsmith, Johnson, Burke, Macaulay, Lamb, DeQuincey, Sidney Smith. Each student writes an exhaustive essay on one author, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors.

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## FRENCH LANGUAGE AND LITERATURE.

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### FRENCH A:

*First Half-year*—Grammar; Composition; Reading of easy prose selections. Four hours.

*Second Half-year*—Grammar continued; Composition; Rapid reading and reading at sight. Four hours.

### FRENCH B:

*First Half-year*—Moliere: reading of one or more of the dramas. Lectures by the instructor on the outlines of French Literature. Four hours.

*Second Half-year*—Corneille; Racine: reading of one or more of the dramas of each. La Fontaine: selections. Four hours.

#### FRENCH C:

*First Half-year*—Daudet, About, or some other modern author. Rapid and sight reading, with a study of the authors of the nineteenth century. Two hours.

*Second Half-year*—Study of some period of French history. Reading of selections from Voltaire, Rousseau and Mme. de Staël.

[French C is an elective for students who have completed Courses A and B.]

Students who offer elementary French (corresponding to French A in the list above) as part of their preparation for admission to the Freshman class, take French B in Freshman year. Candidates for the degree of Bachelor of Philosophy who, having offered German A for admission, take German B in Freshman year, may take French A also as a substitute for Freshman Latin; such students take French B in Sophomore year; and others in the Ph. B. division, whose language first offered was German, take French A in Sophomore year.

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### GERMAN LANGUAGE AND LITERATURE.

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#### GERMAN A:

*First Half-year*—Grammar; Composition; Reading of easy prose selections. Four hours.

*Second Half-year*—Grammar continued; Composition; Prose selections for rapid reading; Reading at sight. Four hours.

#### GERMAN B:

*First Half-year*—Schiller: reading of one or more of the dramas. Lectures on German Literature by the instructor. Four hours.

*Second Half-year*—Lessing: reading and critical study of one or more of the dramas. Lectures by the instructor. Four hours.

#### GERMAN C:

*First Half-year*—Goethe: study of Goetz von Berlichingen, Iphigenia, Tasso or Faust (first part), at the discretion of the instructor. Essays by the class. Two hours.

*Second Half-year*—Schiller: Wallenstein, with a study of contemporary history, or the Ballads of Goethe and Schiller compared, and essays by the class.

[German C is an elective for students who have completed German A and B.]

#### GERMAN D:

*First Half-year*—Middle High German; Grammar; Selections from the Nibelungenlied. Two hours.

*Second Half-year*—Old High German; Grammar and Reader. Two hours.

[German D will be omitted in 1893-94, and given in 1894-95.]

Students who offer elementary German (corresponding to German A in the list above) as part of their preparation for admission to the Freshman class, take German B in Freshman year. Candidates for the degree of Bachelor of Philosophy who, having offered French A for admission, take French B in the Freshman year, may take German A also as a substitute for Freshman Latin; such students take German B in Sophomore year; and others in the Ph. B. division, whose language first offered was French, take German A in Sophomore year.

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## MATHEMATICS AND ASTRONOMY.

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After the completion of elementary Geometry (solid and spherical), the Freshman year is devoted to advanced Algebra, and to the study of plane and spherical Trigonometry. The topics under the former head which receive special attention, are: Series (including the Binomial Formula), Logarithms, and Numerical Higher Equations. In the second half of the Sophomore year, the Conic Sections are studied by the method of Analytical Geometry. This completes the required course in pure mathematics. An elective course of a half-year, in the Modern Geometry (Geometry of Position), is open to Juniors and Seniors. The Calculus is an elective study of the Junior year; and applications to mathematical physics or astronomy may be made in the Senior year, by students who have taken the previous course. Astronomy is a required study in one half of the Senior year, and Professor Young's General Astronomy is used as a text-book.

## PHYSICS.

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During the first half of the Sophomore year, all students take a course in elementary Mechanics, preparatory to the Junior course in Physics.

The Junior course in Physics extends through the year. As given this year, it includes Heat, Electricity and Magnetism, and Light. The more advanced parts of these subjects are taught by lectures, in which the effort is made to embody all important discoveries of recent date, so far as they can be grasped by students of this grade of advancement. With a view to reduce somewhat the time taken up by lectures, students are required to review the elements of the subject on hand from a text-book. Garnett's *Elementary Treatise on Heat* and Cumming's *Electricity Treated Experimentally* are the works now in use.

The aim always kept in view is not only to give students a theoretical knowledge of the subject, but also to offer them facilities for laboratory practice and acquiring skill in experimentation. The practical work in this class consists, mainly, of measurements, as follows:

1. Determination of the diameter of fine tube filled with mercury.
2. Determination of the apparent expansion of mercury by the weight thermometer.
3. Determination of the coefficient of linear expansion of iron.
4. Determination of the latent heat of steam.
5. Determination of the specific heat of lead by the ice calorimeter.
6. Determination of the temperature of maximum density of water, and testing the zero-point of thermometers.
7. Experimental determination of the moment of inertia of a body with respect to a given axis.
8. Determination of the horizontal component of the earth's magnetic intensity.
9. Comparison of the strength of a given magnetic pole with the horizontal component of the earth's magnetism.
10. Determination of the dip by the earth inductor.
11. Determination of the constant (reduction factor) of a tangent galvanometer by electrolysis.



12. Calibration of a galvanoscope.
13. Determination of the equipotential lines of a metallic plate under given conditions.
14. Measurement of resistances by the B. A. wire-bridge.
15. Determination of resistance of a coil by means of a resistance box and tangent galvanometer.
16. Determination of resistance of a battery by a box of resistance coils and tangent galvanometer.
17. Determination of battery resistance by Mance's method, and of galvanoscope resistance by Thomson's method.
18. Determination of battery resistance by Thomson's method.
19. Proof of Ohm's Law.
20. Comparison of electro-motive forces of cells by the high resistance method.
21. Comparison of electro-motive forces of cells by the equal deflection method.
22. Comparison of electro-motive forces of cells by Latimer-Clark's method.
23. Determination of the permeability of iron by Rowland's ring method.
24. Determination of the coefficient of self-induction of a coil.
25. Measurement of the magnifying power of a microscope.
26. Measurement of the index of refraction of a prism.
27. Measurement of the index of refraction of a plate by means of a microscope.
28. Measurement of the focal length of a concave mirror.
29. Determination of the focal lengths of a convex and of a concave lens.
30. Measurement of the wave-length of homogeneous light by means of a grating.
31. Detection of chemical elements in a mixture of substances by means of the spectroscope.
32. Identification of some of the Fraunhofer lines.
33. Determination of the number of vibrations per second of a tuning-fork by the graphic method.
34. Determination of the number of vibrations per second by means of the siren.



35. Verification of the laws of vibrating strings.

An elective course on applications of electricity is offered to Seniors and Juniors.

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## ECONOMIC AND POLITICAL SCIENCE.

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The Juniors take a required course (two hours through the year) in Elementary Political Economy, using Laughlin's Mill as the text book.

An elective course in Political Economy pursues selected subjects in detail. In 1892-3 the subjects are Railways, Socialism, and the Rental-Tax; in 1893-4, Money and Taxation. The course in 1893-4 will be two hours through the second half-year, open to Seniors and Juniors.

The course in Government, given in 1892-3, will be repeated in 1894-5.

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## HISTORY.

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The courses in History are elective, and are varied from year to year. In 1893-4, Political History of the United States, with Schouler's History as the principal text-book. Four hours through the first half-year, upon the history from 1783 to 1837; two hours through the second half-year, continuing the subject to 1861. Open to Seniors and Juniors.

The course in the Political History of England from 1485 to 1714, given in 1892-3, will be repeated in 1894-5.

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## ORATORY.

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The purpose in this department is to develop the individual oratorical forces of the student. The work looks toward increased strength through self-expression rather than the direct effort to eliminate faults. The student is encouraged to find out his power. It is believed that Oratory, taught with this object in view, is unsurpassed in its power of education.

The work consists of the Philosophy and Art of Expression taught in classes during the Freshman and Senior years. There is

also individual practice on original orations, which are delivered before the College, in Sophomore, Junior and Senior years. All students have regular drill in Voice Culture and in the principles of Gesture. The education of the Imagination and of the Emotions is especially sought.

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## CHEMISTRY.

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### REQUIRED WORK.

The course is intended to give a general knowledge of the subject of Chemistry. Recitations and lectures are employed as occasion may require for the purposes of instruction; and work in the laboratory, systematically and constantly followed, is required of each student, to insure a practical familiarity with the substances and processes examined. The hours of laboratory work number not less than the hours of recitation, and are observed under the supervision of the instructor. The experimental work of the students is designed to inculcate habits of close observation and scientifically accurate methods of experiment and inquiry. The principles of Chemistry, its practical application in the arts, and its use in the explanation of the phenomena of daily life, are brought prominently forward in the course, but the student is also trained to obtain readily from technical works the data and details familiar only to the professional chemist. Special series of experiments will, from time to time, be required; and written reports upon the work must be handed in. The preparation of abstracts from books on Chemical Technology and Sanitary Science will occasionally take the place of the general work. The subject is so presented as to form a basis for the scientific studies of the Junior and Senior years.

*Text-books.*—Reynold's Experimental Chemistry (Pneumatic Chemistry and Chemistry of the Non-Metals); Reynold's Experimental Chemistry (Metals and Allied Bodies); Remsen's Organic Chemistry (Selections).

### ADVANCED COURSES.—ELECTIVE.

The following courses have been arranged for students who prefer to continue the chemical work of the Sophomore year:

(a) *General and Applied Chemistry.*—This course follows, in the main, the outlines of the work of the required course. Theoretical Chemistry is much more fully treated, and more elaborate and delicate experiments are arranged to illustrate and explain general laws. The more recent advances, both in theoretical and applied chemistry,

are noted and discussed in connection with the various elements, or groups, under consideration. The applications of chemistry to the arts are studied in greater detail, and the modern uses of chemistry in the sciences of Biology, Medicine, Geology, etc., are treated as fully as the length of the course will permit. Instruction is given mainly by lectures, but references are freely made to the works of Remsen, Fownes, Roscoe and Schorlemmer, etc., for particular subjects. Certain works on Sanitary Science are assigned for private study and the preparation of abstracts and written discussions. In lieu of the usual preparation of lessons for recitation, students are required to perform in the laboratory the experiments given in the lectures, and such others, in addition, as may be outlined for practice. The hours of lecture and recitation are four per week, continued for one year. The hours required for laboratory work are six per week for the same period.

(b) *Qualitative Chemical Analysis*—This course is open only to students who, by previous study of General Chemistry, are properly qualified for the work. The time occupied by the course is the first half of the year, and the hours required for laboratory work are two consecutive hours, five days per week. The lectures will be given at such hours and at such intervals as shall be best suited to the class. A text-book for reference and study will be assigned at the beginning of the term. The work of the course comprises experimental drill in obtaining characteristic reactions of the more common elements, study of empirical formulæ and symbolic expression of reactions, solution of substances, separation of groups of elements, and finally, analysis—first of simple salts, and later of complex mixtures. The analytical work is confined almost wholly to inorganic substances, but includes certain common organic acids and a few organic bodies of general and medical use. The final examination is both experimental and theoretical in character.

(c) *Quantitative Chemical Analysis*—The course in Quantitative Analysis presupposes a knowledge of General Chemistry and Qualitative Analysis. In it are included the volumetric measurement of liquids, the accurate use of fine balances, and the general subject of stoichiometry. In the earlier part of the course, the student is made familiar with gravimetric and volumetric determinations of single elements, by approved methods. Complete analysis of simple salts follow next in order. Salts, alloys, minerals, ores, slags, and mineral water, are among the substances comprising the list required to be analyzed by the student. The analysis of inorganic substances only

is studied in this course. As a final part of his work in the course, the student is given practice in a few of the commercial or rapid determinations of the constituents of ores and minerals.

The course occupies the last term of the year for its completion. The laboratory work occupies two consecutive hours, five days per week. Lectures will be given at intervals through the course. The text-book for this year will be *Quantitative Analysis*, by Cairns.

#### DEPOSITS, CHEMICALS, SUPPLIES, ETC.

The cost of chemicals, glassware, and supplies used by students in any of the courses mentioned, must be defrayed by themselves. A deposit, estimated as probably sufficient to cover the ordinary expenses of the work, must be made by each student, with the instructor, at the beginning of the term. Any balance remaining will be returned at the completion of the course. Glassware and general supplies (but not chemicals), if in condition for reissue, may be returned, subject to a small discount. The deposit required for each course is as follows:

General Chemistry—Preparatory course.....	\$4 00
General Chemistry—Sophomore year.....	5 00
General Chemistry—Elective course.....	10 00
Qualitative Analysis—Elective course.....	15 00
Quantitative Analysis—Elective course.....	15 00

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#### BIOLOGY.

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The study of Biology is required of Freshmen in the Bachelor of Philosophy division. The course extends through the year; three exercises a week, usually of two hours each, with additional laboratory work, if the instructor considers it necessary.

In the first half-year, the object is to give the student a clear conception of the fundamental Biological principles. The lower forms of plant and animal life will be studied, such as *Amœba*, *Infusoria*, *Hydra*, *Corals*, *Echinoderms*, *Yeast*, *Mould*, *Spirogyra*, etc.

In the second half-year, following the plan of the previous work, higher forms will be studied, such as *Crayfish*, *Clam*, *Snail*, *Frog*, *Cat*, etc.; *Ferns* and *Flowering Plants*.

The following elective courses are offered to Seniors and Juniors who are qualified for them by their previous work:

*Comparative Morphology of the Vertebrata*—Through the first half-year. Two exercises weekly: laboratory work, with references

to the writings of Flower, Huxley, Lydekker, Wiedersheim and others.

*Systematic Zoology*—Three times a week through the second half-year. Recitations. Claus and Sedgwick's Text-book of Zoology.

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## GEOLOGY.

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The study of Geology is required of the Ph. B. division in Sophomore year, and is an elective for the A. B. division in Junior and Senior year. Four hours per week, throughout the year, are devoted to the work.

The lectures and recitations are supplemented by field work and excursions to points of geological interest in the vicinity of the College. An important consideration in laying out the course in Geology has been the desire to inculcate the habit of close and accurate observation, and of logical and practical deduction from the phenomena brought to notice. It is sought to show the history of the earth and the development of its flora and fauna from the evidences presented in the rocks themselves. In the first half-year, Dynamical and Structural Geology are studied; in the second half-year, Historical Geology.

The study of Geology is peculiarly attractive and practical in this section of the State. In few localities can be found exposures of so many and varied strata of different geological ages. The region about Pike's Peak is particularly rich in the number and excellence of both rare and common minerals produced. Fossils are abundant at many points, and the older and later rock formations are often found in close proximity. The work of the course includes the practical study of Lithology, with the preparation of rock-sections on the lithological lathe. The lithological microscope opens to the student the most modern lines of investigation into the nature of rocks.

The character of the region about the College is well adapted to illustrate Dynamical Geology. Faults, veins, dikes, water-erosion, sand-carving and glacial action can be found near at hand. A good selection of lantern slides enables the instructor to add to the natural illustrations of the surrounding district the evidences collected from many other favored localities.

The text-book for the year will be *Elements of Geology*, by LeConte, edition of 1891.



Elective courses, open to Seniors and Juniors who have had Elementary Geology, are offered as follows:

*Economic Geology*.—Three times a week through the first half-year. Recitations. Text-book, Williams' Applied Geology.

*Paleontology*.—Twice a week through the second half-year. Laboratory work, using the books of Zittel, Leidy, Cope, Marsh, Scott, Osborn and others. The theories of evolution and development receive attention.

#### DETERMINATIVE MINERALOGY AND BLOWPIPING.

The course is offered as an elective in the Junior year. It is recommended to students who purpose taking the Geology of the Senior year. The instruction includes: use of the blowpipe; reactions of common elements with fluxes; colorations of flame; reactions on charcoal; examinations in open and closed tubes, etc. Following these elementary steps, the determination of elements and certain radicals in compounds, is taken up. The analysis and determination of common minerals occupies a large portion of the course. As a concluding work is given the blowpipe assay of ores of silver, gold, copper, and lead. To students, engineers, physicians and others interested in scientific pursuits, the blowpipe is frequently an indispensable adjunct. Its correct and easy use often rapidly and surely clears away uncertainties, and proves of great value. To collectors of minerals, and to geologists, it must always be an important assistant. The vicinity of the College is unusually rich in mineralogical specimens.

The text-book used is Cornwall's Manual of Blowpipe Analysis.

The work required occupies two consecutive hours, four times per week, through the first term of the year. The examination is entirely experimental.

Complete apparatus, peculiar to this study, is kept in stock, and is sold to the student at cost.

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#### PRIZES AND HONORS.

College Scholarship Honors of two grades are awarded in June for excellence in the work of the year. The Honor List for 1891-2 was as follows:

##### HIGH HONORS.

HENRY J. OLMSTED, of Arlington Heights, Illinois, *Special Student*.



## HONORS.

*Class of 1892:*

JOSEPH B. KETTLE, of Jamestown, New York.  
D. FLEMING MATCHETT, of Washington, Iowa.

*Class of 1893:*

HARVEY S. MURDOCH, of Okolona, Mississippi.

*Class of 1894:*

FRANK C. COOPER, of Colorado Springs.  
WILLIAM L. TIBBS, of Smithfield, Pennsylvania.

*Class of 1895:*

NETTIE M. CAREY, of Greeley, Colorado.

The College Oratorical Prize, for an original oration, is awarded in June to the winner of a public competition. The winner in June, 1892, was—

HORACE S. COOPER, of Colorado Springs.

A prize for proficiency in Latin will hereafter be offered for competition among members of the Freshman class. This prize will be of the annual value of ten dollars, and will be given in books.

# SCHEDULE OF RECITATIONS.

Hour.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8.30	CHAPEL.	CHAPEL.	CHAPEL.	CHAPEL.	CHAPEL.
1	I. Latin. III. English. Fr. Greek. Fr. Biology. Soph. Chemistry (Ph. B.)	I. Latin. III. Mathematics. Fr. Elocution. Jun. Physics.	I. Latin. III. English. Fr. Greek. Fr. Biology. Jun. Physics.	I. Latin. III. Mathematics. Fr. Elocution. Jun. Physics. French C.	I. Latin. III. English. Fr. Greek. Fr. Biology. Soph. Chemistry (Ph. B.). French C.
2	II. Latin. German A. Fr. Biology, continued.	II. Latin. German A. Soph. Mathematics. Jun. English.	II. Latin. German A. Fr. Biology, continued. Soph. Mathematics. Jun. English.	II. Latin. German A. Soph. Mathematics. Jun. Political Economy.	II. Latin. IV. Mathematics. Fr. Biology, continued. Soph. Latin. Soph. Chemistry (Ph. B.); continued. Jun. English.
9.35	Soph. Chemistry (Ph. B.); continued. Jun. Political Economy.				
10.20	GYMNASIUM.	GYMNASIUM.	GYMNASIUM.	GYMNASIUM.	GYMNASIUM.
3	I. Algebra. III. Latin. Fr. Mathematics. Soph. Greek. Soph. Chemistry (Ph. B.); continued.	I. Algebra. III. Latin. German B. Soph. Greek. Sen. Elocution.	I. Algebra. III. Latin. IV. Elocution. German B. Soph. Greek.	I. Algebra. III. Latin. IV. Elocution. Soph. Greek. [Sen. Hist. of Philosophy.] <i>Sen. Ethics.</i>	I. Algebra. III. Latin. German B. Sen. Elocution.
10.40					

4	11.30	I. and II. Elocution. IV. Latin. French A. Soph. Chemistry (A. B.), [Sen. Astronomy.]	II. Greek. [II. Physiography.] <i>II. Physiology.</i> IV. Latin. French A. Soph. Chemistry (A. B.), Sen. English.	II. Greek. [II. Physiography.] <i>II. Physiology.</i> IV. Latin. French A. Soph. Chemistry (A. B.), Sen. English.	II. Greek. [II. Physiography.] <i>II. Physiology.</i> IV. Latin. French A. Soph. Chemistry (A. B.), Sen. English.	II. Greek. [II. Physiography.] <i>II. Physiology.</i> IV. Latin. French A. Soph. Chemistry (A. B.), Sen. English.
		III. and IV. Physics. III. Greek. Fr. Latin. Soph. Chemistry (A. B.), continued. German C.	I. English. [II. and III. English Hist.] III. Greek. Fr. Latin. Soph. Chemistry (A. B.), continued. German C.	I. English. III. and IV. Physics. III. Greek. Fr. Latin. Soph. Chemistry (A. B.), continued. Soph. Geology. German C.	I. English. III. and IV. Physics. III. Greek. Fr. Latin. Soph. Chemistry (A. B.), continued. Soph. Geology. German C.	I. English. [II. and III. English Hist.] III. Greek. Fr. Latin. Soph. Chemistry (A. B.), continued. Soph. Geology. [Sen. Astronomy.]
6	2.30	II. English. IV. Greek. French B. Jun. Physics.	[II. English.] <i>II. Algebra.</i> IV. Greek. Soph. Chemistry (Ph. B.), Jun. Psychology.	[II. English.] <i>II. Algebra.</i> IV. Greek. French B. Jun. Psychology.	II. English. IV. Greek. Soph. Chemistry (Ph. B.), Jun. Psychology.	II. English. III. and IV. Physics. IV. Greek. French B. Jun. Psychology.
		[I. II. and III. Roman Hist.] <i>I. English History.</i> <i>II. and III. Greek History.</i> <i>II. and III. Drawing.</i> Soph. English. Jun. Physics, continued.	I. and II. Elocution. IV. Mathematics. Soph. English.	I. and II. Elocution. IV. Mathematics. Soph. English.	<i>II. and III. Drawing.</i> Fr. Mathematics. Soph. Chemistry (Ph. B.), continued.	[I. II. and III. Roman Hist.] <i>I. English History.</i> <i>II. and III. Greek History.</i> III. and IV. Physics, cont'd.
8	4.10	Soph. English. Jun. Physics, continued.	Soph. Latin. [Sen. Hist. of Philosophy.] <i>Sen. Ethics.</i>	[Sen. Hist. of Philosophy.] <i>Sen. Ethics.</i>	Soph. Latin. [Sen. Hist. of Philosophy.] <i>Sen. Ethics.</i>	Fr. English. [Sen. Hist. of Philosophy.] <i>Sen. Ethics.</i>
		<i>II. and III. Drawing,</i> continued.	French B.		<i>II. and III. Drawing,</i> continued. German B.	Soph. Mathematics.

[Bracketed titles] are for first half-year only.

*Italicized titles* are for second half-year only.



PALMER HALL.

## THE CUTLER ACADEMY.

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This fitting-school, named in honor of one of the most generous and steadfast friends of Colorado College (Henry Cutler, of Massachusetts), provides a thorough preparation for any college in the United States. While the preparatory training is the principal aim, the plan of study is so arranged as to meet the requirements of students who do not propose going on into college work. The course is a thorough one, embracing four years, and the teaching is carefully conducted by experienced instructors, most of them the same who are employed in the College.

Correspondence concerning the Cutler Academy should be addressed to M. C. GILE, Assistant Principal.

## FACULTY.

WILLIAM FREDERICK SLOCUM, JR.,  
*Principal.*

M. CLEMENT GILE, *Greek,*  
*Assistant Principal.*

SUSAN ALMIRA BACON,  
*French and German.*

FLORIAN CAJORI,  
*Physics.*

DOUGLAS J. CARNEGIE,  
*Physiology.*

FRANCIS W. CRAGIN,  
*Physiography.*

WILLIAM M. HALL,  
*History.*

FRANK H. LOUD,  
*Mathematics.*

WILFRED P. MUSTARD,  
*Latin.*

ATHERTON NOYES,  
*English.*

MARION MCGREGOR NOYES,  
*Latin.*

EDWARD S. PARSONS,  
*English.*

WILLIAM STRIEBY,  
*Chemistry.*

J. FOSTER TUCKER,  
*Elocution and Physical Culture.*



## REQUIREMENTS FOR ADMISSION.

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Candidates for admission to the Cutler Academy are expected to have finished the eighth grammar grade in the public schools, or otherwise to have pursued a similar course, and at the discretion of the Faculty certificates for this work may be received. The examinations for entrance cover the subjects of Arithmetic, English, Grammar, Spelling, and Geography, none of which are included in the courses of the Academy.

Applicants for admission who have, within six months, been students in the Colorado Springs High School, must present certificates from the High School showing completion of the work of the grade preparatory to the Academy class which they wish to enter. The High School will, upon payment of a small fee, provide special examinations for this purpose, if the regular examinations were not passed. The Academy will not examine such applicants, unless upon subjects which were not included in their High School course.

## COURSES OF INSTRUCTION.

## CLASSICAL COURSE.

## FIRST YEAR.

[The figures denote the number of recitations a week.]

FIRST HALF:	{	<i>Latin</i> : Collar and Daniell's Beginner's Book. Collar's Gradatim, . . . . .	5
		<i>Algebra</i> : Wells' Higher Algebra, through fractions, . . . . .	5
		<i>English</i> : Kellogg's Rhetoric. Scudder's American Poems and American Prose. Tri-weekly Compositions, . . . . .	4
		<i>History</i> : Roman, . . . . .	2
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. I, . . . . .	2
SECOND HALF:	{	<i>Latin</i> : Beginner's Book Completed. Reading at Sight (Gradatim). Collar's Gate to Cæsar, . . . . .	5
		<i>Algebra</i> : Through Radicals and easy Quadratic Equations, . . . . .	5
		<i>English</i> : Work of first term continued, . . . . .	4
		<i>History</i> : English, . . . . .	2
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. II, . . . . .	2

## SECOND YEAR.

FIRST HALF:	{	<i>Latin</i> : Grammar (Allen and Greenough). Cæsar's Gallic War, Books II, III, IV. Prose Composition (Daniell). Reading at Sight, . . . . .	5
		<i>Greek</i> : Grammar (Hadley-Allen). Frost's Primer. First Greek Reader (Moss), . . . . .	4
		<i>English</i> : Rhetoric continued. Reading. Tri-weekly Compositions, . . . . .	3
		<i>Algebra</i> : Quadratic Equations completed, . . . . .	2
		<i>History</i> : English and Greek, . . . . .	3
SECOND HALF:	{	<i>Latin</i> : Grammar. Cæsar, Bk. I. Ovid: Stories from the Metamorphoses. Reading at Sight. Prose Composition, . . . . .	5
		<i>Greek</i> : Grammar. Xenophon (Coy's First Greek Reader). Reading at Sight, . . . . .	4
		<i>English</i> : Work of first term continued, . . . . .	3
		<i>Algebra</i> : Proportions, Progressions, and allied topics, . . . . .	2
		<i>History</i> : English and Greek, . . . . .	3

## THIRD YEAR.

FIRST HALF:	<i>Latin:</i> Grammar. Cicero: Four Orations against Catiline. Reading at Sight. Prose Composition, . . . . .	5
	<i>Greek:</i> Xenophon's Anabasis (Kelsey), two books. Reading at Sight. Written Translations. Composition (Woodruff), . . . . .	5
	<i>Geometry:</i> Wentworth, Books I and II, or the equivalent in another author, . . . . .	4
	<i>English:</i> Critical study of books prescribed by the New England Association of Colleges. . . . .	3
SECOND HALF:	<i>Latin:</i> Grammar. Cicero: Orations for Archias, for Marcellus, and for the Manilian Law. Vergil: Bucolics. Reading at Sight. Prose Composition, . . . . .	5
	<i>Greek:</i> Xenophon's Anabasis, two books, or equivalent. Reading at Sight. Composition, . . . . .	5
	<i>Geometry:</i> Plane Geometry completed, . . . . .	4
	<i>English:</i> Work of first term continued, . . . . .	3

## FOURTH YEAR.

FIRST HALF:	<i>Latin:</i> Grammar. Vergil: Aeneid, Bks. I-IV. Reading at Sight. Prose Composition, . . . . .	5
	<i>Greek:</i> Homer and Herodotus (Merry's Specimens of Greek Dialects). Composition. Reading at Sight, . . . . .	5
	<i>German:</i> Grammar. Composition. Reading of easy prose selections, . . . . .	4
	<i>Mathematics:</i> Review and general exercises. . . . .	2
	<i>Elocution:</i> Emerson's Evolution of Expression, Vol. III, . . . . .	2
SECOND HALF:	<i>English:</i> Essays. . . . .	
	<i>Latin:</i> Grammar. Vergil: Aeneid, Bks. V-VI. Reading at Sight. Prose Composition. Reviews, . . . . .	5
	<i>Greek:</i> Homer's Iliad, three books. Written Translations. Old Greek Life (Mahaffy). History of Greek Literature (Jebb). Composition, . . . . .	5
	<i>German:</i> Grammar. Composition. Rapid reading of prose selections. Reading at Sight, . . . . .	4
	<i>Mathematics:</i> Review and general exercises. . . . .	2
	<i>Elocution:</i> Emerson's Evolution of Expression, Vol. IV, . . . . .	2
	<i>English:</i> Essays. . . . .	

## LATIN-SCIENTIFIC COURSE.

## FIRST YEAR.

[The figures denote the number of recitations a week.]

FIRST HALF:	{	<i>Latin</i> : Collar and Daniell's Beginner's Book.	
		Collar's Gradatim, . . . . .	5
		<i>Algebra</i> : Wells' Higher Algebra, through fractions, . . . . .	5
		<i>English</i> : Kellogg's Rhetoric. Scudder's American Poems and American Prose. Tri-weekly Compositions, . . . . .	4
		<i>History</i> : Roman, . . . . .	2
	{	<i>Elocution</i> : Emerson's Evolution of Expression, Vol. I, . . . . .	2
SECOND HALF:	{	<i>Latin</i> : Beginner's Book completed. Reading at Sight (Gradatim). Collar's Gate to Cæsar, . . . . .	5
		<i>Algebra</i> : Through Radicals and Easy Quadratic Equations, . . . . .	5
		<i>English</i> : Work of first term continued, . . . . .	4
		<i>History</i> : English, . . . . .	2
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. II, . . . . .	2

## SECOND YEAR.

FIRST HALF:	{	<i>Latin</i> : Grammar (Allen and Greenough). Cæsar's Gallic War, Books II, III, IV. Prose Composition (Daniell). Reading at Sight, . . . . .	5
		<i>Physiography</i> : Thornton's Elementary Physiography. Recitations and Lectures, . . . . .	4
		<i>English</i> : Rhetoric continued. Reading. Tri-weekly Compositions, . . . . .	3
		<i>Algebra</i> : Quadratic Equations completed, . . . . .	2
		<i>History</i> : English, . . . . .	2
	{	<i>Drawing</i> , . . . . .	1
SECOND HALF:	{	<i>Latin</i> : Grammar. Cæsar, Bk. I. Ovid: Stories from the Metamorphoses. Reading at Sight. Prose Composition, . . . . .	5
		<i>Physiology</i> : Huxley's Elementary Lessons in Physiology. Martin's Human Body, . . . . .	4
		<i>English</i> : Work of first term continued, . . . . .	3
		<i>Algebra</i> : Proportions, Progressions, and allied topics, . . . . .	2
		<i>History</i> : English, . . . . .	2
	{	<i>Drawing</i> , . . . . .	1

## THIRD YEAR.

FIRST HALF:	{	<i>Latin:</i> Grammar. Cicero: Four Orations against Catiline. Reading at Sight. Prose Composition, . . . . .	5
		<i>Physics:</i> Text-book and Laboratory Practice.	4
		<i>Geometry:</i> Wentworth, Books I and II, or the equivalent in another author, . . . .	4
		<i>English:</i> Critical study of books prescribed by the New England Association of Colleges, . . . . .	3
SECOND HALF:	{	<i>Latin:</i> Grammar. Cicero: Orations for Archias, for Marcellus, and for the Manilian Law. Vergil: Bucolics. Reading at Sight. Prose Composition, . . . . .	5
		<i>Physics:</i> Text-book and Laboratory Practice.	4
		<i>Geometry:</i> Plane Geometry completed, . . .	4
		<i>English:</i> Work of first term continued, . . .	3

## FOURTH YEAR.

FIRST HALF:	{	<i>Latin:</i> Grammar. Vergil: Aeneid, Bks. I-IV. Reading at Sight. Prose Composition, . .	5
		<i>German:</i> Grammar. Composition. Reading of easy prose selections, . . . . .	4
		<i>Chemistry:</i> Williams' Introduction to Chemical Science. Laboratory Practice, . . .	4
		<i>Mathematics:</i> Review and general exercises.	2
		<i>Elocution:</i> Emerson's Evolution of Expression, Vol. III, . . . . .	2
		<i>English:</i> Essays.	
SECOND HALF:	{	<i>Latin:</i> Grammar. Vergil: Aeneid, Bks. V-VI. Reading at Sight. Prose Composition. Reviews, . . . . .	5
		<i>German:</i> Grammar. Composition. Rapid reading of prose selections. Reading at Sight, . . . . .	4
		<i>Chemistry:</i> Work of first term continued, . .	4
		<i>Mathematics:</i> Review and general exercises.	2
		<i>Elocution:</i> Emerson's Evolution of Expression, Vol. IV, . . . . .	2
		<i>English:</i> Essays.	

## SCIENTIFIC COURSE.

## FIRST YEAR.

[The figures denote the number of recitations a week.]

FIRST HALF:	{	<i>Latin</i> : Collar and Daniell's Beginner's Book. Collar's Gradatim, . . . . .	5
		<i>Algebra</i> : Wells' Higher Algebra, through fractions, . . . . .	5
		<i>English</i> : Kellogg's Rhetoric. Scudder's American Poems and American Prose. Tri-weekly Compositions, . . . . .	4
		<i>History</i> : Roman, . . . . .	2
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. I, . . . . .	2
SECOND HALF:	{	<i>Latin</i> : Beginner's Book completed. Reading at Sight (Gradatim). Collar's Gate to Cæsar. . . . .	5
		<i>Algebra</i> : Through Radicals and Easy Quadratic Equations, . . . . .	5
		<i>English</i> : Work of first term continued, . . . . .	4
		<i>History</i> : English, . . . . .	2
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. II, . . . . .	2

## SECOND YEAR.

FIRST HALF:	{	<i>Latin</i> : Grammar (Allen and Greenough). Cæsar's Gallic War, Books II, III, IV. Prose Composition (Daniell). Reading at Sight, . . . . .	5
		<i>Physiography</i> : Thornton's Elementary Physiography. Recitations and Lectures, . . . . .	4
		<i>English</i> : Rhetoric continued. Reading. Tri-weekly Compositions, . . . . .	3
		<i>Algebra</i> : Quadratic Equations completed, . . . . .	2
		<i>History</i> : English, . . . . .	2
SECOND HALF:	{	<i>Drawing</i> , . . . . .	1
		<i>Latin</i> : Grammar. Cæsar, Bk. I. Ovid: Stories from the Metamorphoses. Reading at Sight. Prose Composition, . . . . .	5
		<i>Physiology</i> : Huxley's Elementary Lessons in Physiology. Martin's Human Body, . . . . .	4
		<i>English</i> : Work of first term continued, . . . . .	3
		<i>Algebra</i> : Proportions, Progressions, and allied topics, . . . . .	2
		<i>History</i> : English, . . . . .	2
		<i>Drawing</i> , . . . . .	1

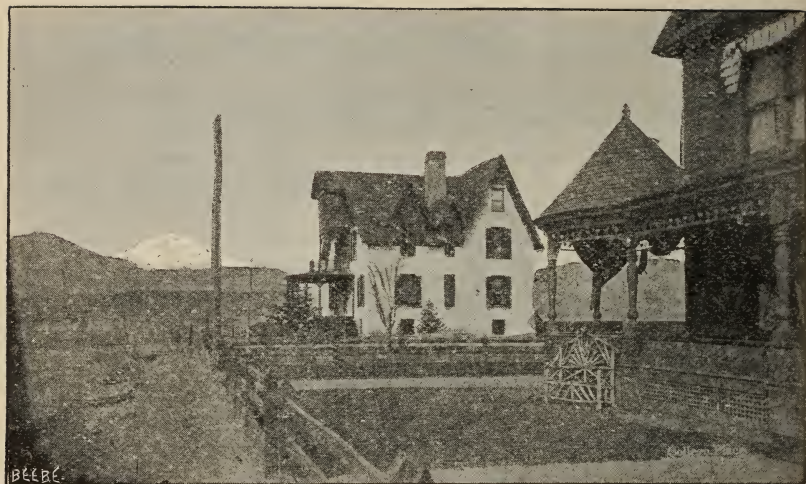


## THIRD YEAR.

FIRST HALF:	<i>German</i> : Grammar. Composition. Reading of easy prose selections, . . . . .	4
	<i>Physics</i> : Text-book and Laboratory Practice. . . . .	4
	<i>Geometry</i> : Wentworth, Bks. I and II, or the equivalent in another author, . . . . .	4
	<i>Algebra</i> : Review and general exercises, . . . . .	2
	<i>English</i> : Critical study of books prescribed by the New England Association of Colleges, . . . . .	3
SECOND HALF:	<i>German</i> : Grammar. Composition. Rapid reading of prose selections. Reading at Sight, . . . . .	4
	<i>Physics</i> : Text-book and Laboratory Practice. . . . .	4
	<i>Geometry</i> : Plane Geometry completed, . . . . .	4
	<i>Algebra</i> : Review and general exercises, . . . . .	2
	<i>English</i> : Work of first term continued, . . . . .	3

## FOURTH YEAR.

FIRST HALF:	<i>German</i> : Schiller: reading of one or more of the dramas. Lectures on German Literature, . . . . .	4
	<i>French</i> : Grammar. Composition. Reading of easy prose selections, . . . . .	4
	<i>Chemistry</i> : Williams' Introduction to Chemical Science. Laboratory Practice, . . . . .	4
	<i>Mathematics</i> : Solid Geometry. Advanced Algebra, . . . . .	4
	<i>Elocution</i> : Emerson's Evolution of Expression, Vol. III, . . . . .	2
	<i>English</i> : Essays.	
SECOND HALF:	<i>German</i> : Lessing: reading and critical study of one or more of the dramas. Lectures by the Instructor, . . . . .	4
	<i>French</i> : Grammar. Composition. Rapid reading of prose selections. Reading at Sight. . . . .	4
	<i>Chemistry</i> : Work of first term continued, . . . . .	4
	<i>Mathematics</i> : Plane and Spherical Trigonometry, . . . . .	4
	<i>Elocution</i> : Emerson's Evolution of Expression, Vol. IV., . . . . .	2
	<i>English</i> : Essays.	



PRESIDENT'S RESIDENCE, COLLEGE PLACE.

## CIRCULAR OF INFORMATION.

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### LOCATION.

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The City of Colorado Springs is admirably adapted for a college town. At its very foundation plans were wisely laid, and the succeeding growth has maintained a most healthy character of morality and culture, to which has been added the element of wealth, increasing since the construction of radiating railroad systems, at a brisk, though not an abnormal, rate. The result is a prosperous, wide-awake town, from which saloons and all attendant destructive influences are absent, having a population drawn from every section of the Union, as well as from England, and, in a slight degree, from other foreign countries; but, whether native or foreign, composed almost wholly of the better class of settlers; a town at present of about twelve thousand inhabitants, but with all the conveniences of a larger city—water-works, sewers, electric lights, electric street-railway, mail delivery, telephone communication north, south, and west. It is a noted health-resort, but has nothing of the air of a hospital. But while it possesses the attractions of a city, the lover of nature may seek far for a spot more favored. The mountains are close at hand, and their serrated line occupies about a third of the horizon. In the center stands Pike's Peak, a name familiar everywhere, to whose summit henceforth the traveler may ascend by carriage or railway-car, or by romantic bridle paths, remote from the thronged lines of summer travel. The climate has obtained a world-wide reputation. Its curative qualities consist largely in the opportunity for out-

door exercise, afforded by the great number of fine days, to which the dryness and rarity of the air adds a quality exhilarating to all, and regarded as a specific in cases of malarial disease, asthma, and incipient phthisis. Students unable to work in other climates may here continue their studies, while at the same time making a permanent gain in health. This plan has been successfully carried out in a number of instances.

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#### SPECIAL STUDENTS.

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Special students will be received, at the discretion of the Faculty, into such classes as they are qualified to enter.

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#### LIBRARY.

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The library contains about eight thousand volumes and more than a thousand pamphlets.

In June, 1892, the sum of \$50,000 was received from Hon. N. P. Coburn, of Newton, Mass. Of this amount, \$35,000 is to be expended on a library building, and the remainder is to form an income-bearing fund for the purchase of books. The plans for the new building have been made by Messrs. Andrews, Jacques & Rantoul, of Boston, and work on it will begin at once.

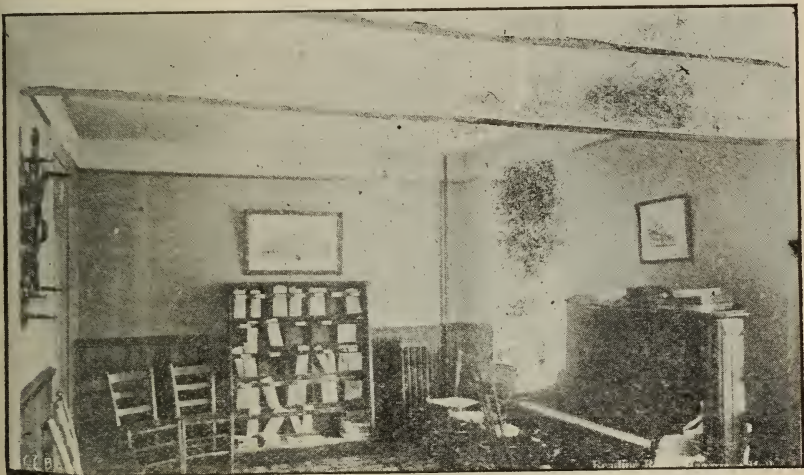
Rev. Charles Ray Palmer, D. D., of Bridgeport, Conn., has recently established a library-purchasing fund of \$2,500, in memory of his son, who, at the time of his death, was under appointment to the staff of Colorado College. This fund is to be called "The Alfred Barnes Palmer Library Fund."

A valuable set of books on the War of the Rebellion, (Official Record of the Union and Confederate Armies), has been received from Charles H. Toll, Esq., of Denver, and a number of miscellaneous works from Mr. J. C. Devin,

of Ottumwa, Iowa. All the government publications of the United States are regularly received as issued.

### READING ROOMS.

In connection with the library is a reading room for the use of students and friends of the College, where the current magazines of literature and science, as well as a



READING ROOM, HAGERMAN HALL.

number of leading newspapers, may be consulted. The Young Men's Christian Association of the College has also a similar room in Hagerman Hall.

### LABORATORIES AND APPARATUS.

The laboratories of the College supply the means for thorough and practical training in the scientific branches of the curriculum.



A good telescope of five inches aperture, equatorially mounted on a tripod, was presented to the College in September, 1892, by Henry R. Wolcott, Esq., of Denver.

A fine stereopticon, operated with the calcium light, may be used by all departments of the College in presenting those topics which are suitable for pictorial illustration. About six hundred selected photographic views, covering many subjects, are now in the possession of the College.



DRAWING ROOM, MONTGOMERY HALL.

### COLLEGE RESIDENCES.

There are two substantial stone buildings on the College grounds, planned with reference to the needs of students. They are warmed by steam, lighted by electricity, and have every desirable convenience.

At Hagerman Hall, which provides for young men, is a dining room that may accommodate one hundred and fifty students. Those who room out of the building can secure meals here at low rates.



Montgomery Hall, given by the Woman's Educational Society of Colorado Springs, is very attractive and provides a thoroughly comfortable home for twenty-six young ladies. Board and room may be obtained at low prices.

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## PHYSICAL TRAINING, EXERCISE AND ATHLETIC SPORTS.

---

The general object sought in Physical Education is symmetry and tone. Immediate results are considered, and through them, results for life.

Daily class-drill in the gymnasium constitutes a part of the training. This class-drill is in free gymnastics, and looks especially to the development of the vital organs of the body and to fitting the body to act with the mind.

Each student is also considered individually. A physician is connected with the department, who, together with the instructor, gives each student a careful physical examination from time to time, with special exercises in view of particular needs.

The education of the emotions is sought through the tone and freedom given to the body, through the principles of gesture, brought out in some of the exercises, and through the department of Elocution, with which this department is directly connected.

There is every opportunity for outdoor sports. An excellent athletic ground is laid out on the college campus. Base-ball, foot-ball and tennis are played almost the entire college year.

A volunteer military company meets twice a week for drill.

## COLORADO COLLEGE SCIENTIFIC SOCIETY.

The Colorado College Scientific Society holds monthly meetings in Palmer Hall. The objects of the society are: "The discussion of recent scientific results, the promotion among its members of scientific inquiry and investigation, and the publication of the more important papers read at its meetings." It was organized in January, 1890, and has already done some excellent work. Three annual publications, entitled "Colorado College Studies," have been issued, and a considerable number of exchanges from associations of like nature, including some foreign societies, have been secured. The attention which the "Studies" have received from scientific men everywhere, encourages the society to continue this publication. The fourth volume will appear in May. The list of articles printed in the first three volumes is as follows:

### FIRST ANNUAL PUBLICATION—

A Rigorous Elementary Proof of the Binomial Theorem—*F. H. Loud.*

On Certain Cubic Curves—*F. H. Loud.*

A Study of the Inductive Theories of Bacon, Whewell, and Mill—*Benj. Ives Gilman.*

A Mathematical Text-book of the Last Century—*F. Cajori.*

Horace, Od. III. 1. 34—*George L. Hendrickson.*

Quinti Ciceronis Commentariolum Petitionis XI, § 43. (B. et K. vol. IX, p. 487.)—*George L. Hendrickson.*

### SECOND ANNUAL PUBLICATION—

Witchcraft Among the Hindus—*Dr. H. W. Magoun.*

Protection of Congressional Minorities—*W. M. Hall.*

Pulsations in the Aortic Arches of the Earthworm—*Miss M. R. Mann.*

Dialectical Studies in West Virginia—*Dr. Sylvester Primer.*

The Study of Diophantine Analysis in the United States—*F. Cajori.*

The Elliptic Functions Defined Independently of the Calculus—*F. H. Loud.*

SECOND ANNUAL PUBLICATION—*Continued*—

On Two Passages in the Crito—*Dr. H. W. Magoun.*

Calibration of Burettes—*D. J. Carnegie.*

On a Passage in the Frogs—*Dr. H. W. Magoun.*

Note on the Hadley-Allen Grammar—*Dr. H. W. Magoun.*

Historical Note on the Differentiation of a Logarithm—*F. Cajori.*

A Mathematical Error in the Century Dictionary—*F. Cajori.*

## THIRD ANNUAL PUBLICATION—

The Etymologies in the Servian Commentary to Vergil — *Dr. W. P. Mustard.*

Notes on Jefferson's Draft of the Ordinance of 1784—*W. M. Hall.*

Some Notes on Blaydes' Nubes—*Dr. A. T. Murray.*

On a passage in Euripides' Iphigenia Taurica—*Dr. A. T. Murray.*

Draper's Barograph—*Florian Cajori.*

The Conditional in German—*Dr. S. Primer.*

Students are encouraged to attend the meetings of the society.

The secretary of the society, to whom all correspondence, exchanges, etc., should be addressed, is Professor Florian Cajori.

## STUDENTS' SOCIETIES.

Associations, of both young men and young women, have been organized in the College, in affiliation with the College Christian Associations of the country, and are useful in promoting the fellowship of students in ways that harmonize with Christian aspiration and effort. A reading room is supported by the young men's association, lectures are given from time to time by various speakers, and religious meetings are held weekly.

The two literary societies of the College furnish opportunity for independent work and drill in public debate and parliamentary practice.

## MUSIC.

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Arrangements have been made with the leading music teachers of the city, whereby members of the College or Academy may have lessons at special rates. A music room has been fitted up, and the lessons are all given on the College grounds.

The College Choral Union meets weekly under a competent director.

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## PRIZE SPEAKING.

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A Prize Oratorical Contest is held each year, open to all members of the College. Two prizes are awarded by a committee of judges selected by the contestants.

A Prize Declamation Contest is held each year, open to members of the Cutler Academy.

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## EXPENSES.

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Tuition, per year.....	\$35 00
Matriculation fee.....	5 00
Library fee.....	3 00
Table board, in Hagerman Hall, per week.....	4 00
Rooms warmed and furnished, per week, from.....\$1.00 to	2 00
(Towels, bed-linen and blankets must be provided by the students.)	
Expenses at Montgomery Hall, including light and heat, per week.....	6 00

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## COLLEGE BILLS.

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The term bills are issued September 21 and February 13, and are payable immediately, unless special arrangements are made with the President.

Students who leave before the end of the term pay full tuition, except under very unusual circumstances.

## PECUNIARY ASSISTANCE.

### SCHOLARSHIPS.

The income of the following scholarships is devoted to the aid of worthy students who may need assistance in completing their course:

The Thomas Davee Scholarship of \$500, established by the late Mrs. T. V. D. Mitchell, of West Minot, Maine.

The Rice Scholarship of \$700, established by friends of the Rev. Charles B. Rice, of Danvers, Mass.



PRESIDENT'S OFFICE.

The Currier Scholarship of \$1,000, founded by the late Hon. Warren Currier, of St. Louis, Mo.

The Edwards Scholarship of \$300, given by the Congregational Church of Wellesley Hills, Mass.

The Mary Caroline Quincey Scholarship of \$500, given by Mr. George Henry Quincey, of Boston, Mass.

Several other scholarships are supported by annual subscription.

## SELF-SUPPORT.

Good scholars have opportunities for private teaching, and any young man can find work in town. Some students have paid all their expenses by current earnings; but the attempt to do this should be avoided if possible, because of its necessary hindrance to good scholarship.

THE WOMAN'S EDUCATIONAL SOCIETY OF COLORADO COLLEGE was formed in April, 1889, by the ladies of Colorado Springs. The purpose of the society is "to give physical, intellectual, and spiritual aid to young women who are students in any department of Colorado College." It has now about one hundred and fifty members. The society is at present raising scholarship funds for young women. The membership fees go to form a beneficiary fund, from which loans are to be made on the following conditions:

*First*—Loans may be made to girls who have been in the College one term, and are recommended by the Faculty as in every way deserving of such aid.

*Second*—No student shall be allowed to incur an indebtedness to the society of more than \$300.

*Third*—Students may receive loans without interest until their connection with the College ceases; after which their notes are to draw interest at 4 per cent.

The officers of the society for the current year, are:

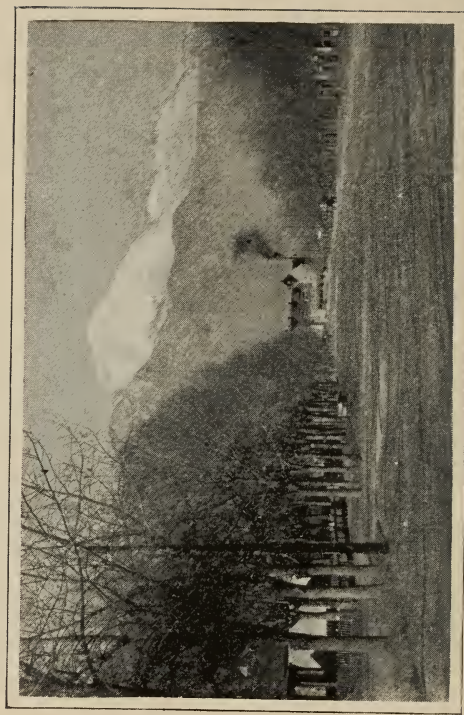
*President*—MRS. WILLIAM F. SLOCUM.

*Secretary*—MRS. EDWARD W. BACON.

*Treasurer*—MISS FRANCES E. LESSLIE.







PIKE'S PEAK FROM COLORADO SPRINGS.

TWENTIETH

Annual Bulletin

OF

Colorado College

AND

Cutler Academy

COLORADO SPRINGS, COLO.

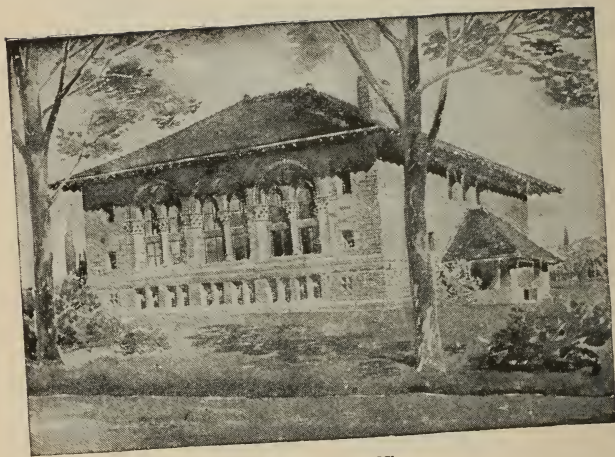
March, 1894.

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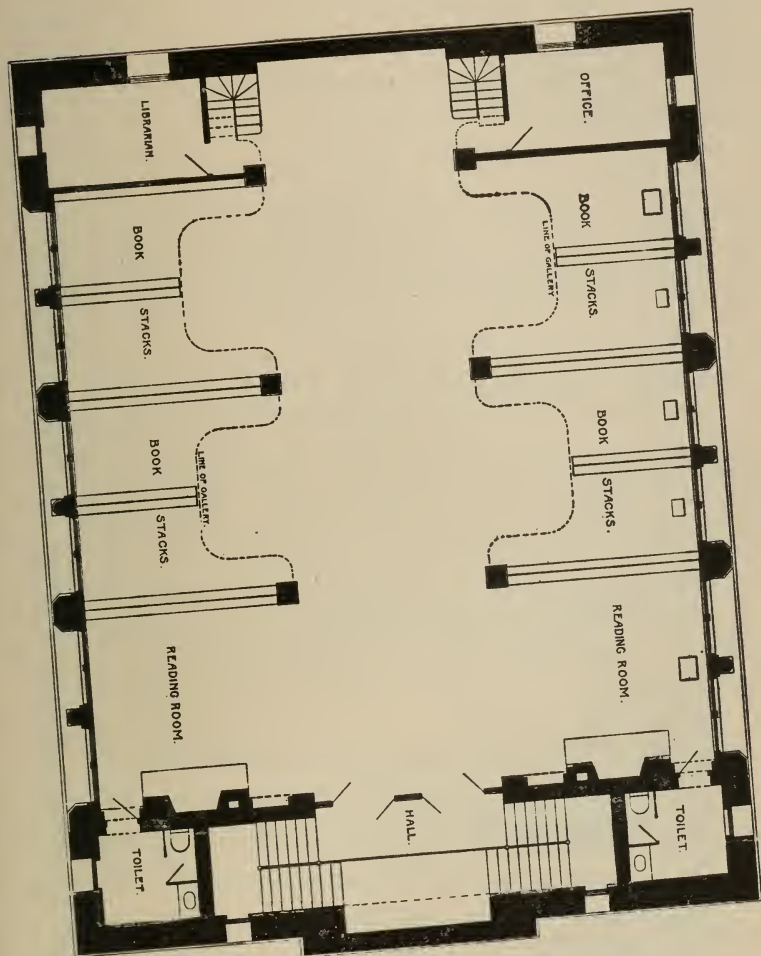
COLORADO SPRINGS:

THE TELEGRAPH PRINTING COMPANY.

1894.



COBURN LIBRARY.



INTERIOR PLAN OF LIBRARY.

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ANNOUNCEMENT.

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Colorado College is the oldest institution of its kind in the State, having been incorporated in 1874, while Colorado was still a Territory, and first opened in May of that year.

Its charter places it under the government of a self-perpetuating board of trustees.

The first President was the Rev. James G. Dougherty, elected in 1875. In the following year he was succeeded by the Rev. E. P. Tenney. In 1885 the office of President became vacant and so remained for three years—without interruption, however, of the work of the college. In the fall of 1888, William Frederick Slocum, Jr., took charge of the institution.

The first permanent building—the central stone structure, since enlarged and now known as “Palmer Hall”—was occupied in 1880. The stone dwelling which serves as the President’s residence was purchased by the trustees in 1888. “Hagerman Hall” was erected in 1889, and is a home for young men and such instructors as desire to make it their residence while connected with the college.

Another stone building, on the college campus, completed in 1891, is named "Montgomery Hall," and furnishes a home for young women who are students in the college. The gymnasium was built in 1891.

The Coburn Library, which the college owes to the generosity of Mr. N. P. Coburn, of Newton, Massachusetts, was finished in February, 1894. It is a beautiful specimen of architecture, and is equipped with all modern appliances for book storage and seminary work. The lower story of the building has been furnished as the College Chapel.

At the beginning of 1893, Dr. D. K. Pearsons, of Chicago, offered to give the trustees \$50,000, provided that an additional \$150,000 should be given by other friends of the college during the next two years. One hundred thousand dollars is to be used for the erection and equipment of a science building, the rest for endowment. The importance of securing this gift is so great that the trustees are making a strong appeal to all friends of the college to help them in raising the necessary amount.

The Observatory presented to the college by Mr. Henry R. Wolcott, of Denver, is now in process of construction.

It is the purpose of the trustees to surround the students with healthful moral and religious influences, without the limitations of sectarianism. They have enlarged the Faculty, and the courses of study have been so arranged

that the same educational facilities are now offered in Colorado College as at the Eastern institutions of higher education. The scope of the college work has been purposely restricted to the Department of Liberal Arts; by which means ampler equipment and a larger Faculty have been secured, and, it is believed, an exceptionally high degree of proficiency attained. Notwithstanding the recent financial depression, the attendance for the last year has been the largest in the history of the institution.

Attention is called to the Cutler Academy, the associated preparatory school, in which students are prepared for any American college.

## TRUSTEES OF THE COLLEGE.

---

WILLIAM F. SLOCUM, JR.,  
*President of the Board.*

DR. B. F. D. ADAMS.

GEORGE W. BAILEY.

W. P. BONBRIGHT.

JOHN CAMPBELL.

JOHN CURR.

HENRY CUTLER.

GEORGE DE LA VERGNE.

REV. JAMES B. GREGG, D. D.

J. J. HAGERMAN.

J. R. HANNA.

IRVING HOWBERT.

WILLIAM S. JACKSON.

F. L. MARTIN.

REV. RICHARD MONTAGUE, D. D.

GEORGE H. PARSONS.

REV. CHARLES B. RICE.

REV. LIVINGSTON L. TAYLOR.

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## EXECUTIVE COMMITTEE.

---

J. J. HAGERMAN, *Chairman.*

GEORGE H. PARSONS, *Secretary*

JOHN CURR.

WILLIAM S. JACKSON.

WILLIAM F. SLOCUM, JR.

---

J. H. BARLOW, *Treasurer of the College.*

# FACULTY.

---

WILLIAM FREDERICK SLOCUM, JR., B. D., LL. D.,

*President and Professor of Philosophy.*

B. A. (Amherst), '74; B. D. (Andover), '78; LL. D. (Amherst), '93;  
(Nebraska), '94; Colorado College, '88.

SUSAN ALMIRA BACON,

*Instructor in French and German.*

Special Student, Frau Dr. Hempel, Berlin; Colorado College, '92.

FLORIAN CAJORI, M. S.,

*Professor of Physics.*

B. S. (University of Wisconsin), '83; Johns Hopkins University, '84-'85  
M. S. (University of Wisconsin), '86; Professor of Applied  
Mathematics, Tulane University, '85-'88; United States  
Bureau of Education, '88-'89; Colorado College, '89.

FRANCIS WHITTEMORE CRAGIN, B. S.,

*Professor of Geology, Mineralogy and Paleontology.*

Agassiz Laboratory, Newport, '81; B. S. (Harvard), '82; Professor of  
Natural History, Washburn College; '82-'91; Colorado College '91.

GEORGE A. H. FRASER, M. A.,

*Professor of Latin*

B. A. (University of Toronto), '89; M. A. (University of Toronto), '90  
Tutorial Fellow in Classics, University of Toronto, '89-'91;  
Professor of Latin and Greek Languages and Literature,  
College of Montana, '91-93; Colorado College, '93.

M. CLEMENT GILE, M. A.,

*Professor of Greek.*

B. A. (Brown University), '83; M. A. (Brown University), '86; Instructor  
in Phillips Academy, Andover, Mass., '83-'92; Assistant  
Professor of Greek, University of Chicago, (on  
leave of absence), '92; Colorado College '92.

WILLIAM M. HALL, B. A.,

*Professor of Political and Social Science and Dean of the Faculty.*

B. A. (Yale), '80; Tutor in Latin, Yale University, '82, '84; Colorado College '90.

C. ST. JOHN HOFMAN,

*Instructor in Drawing.*

Art Students' League of New York, '91-'92; Philadelphia School of Design, '93.

THE REV. E. C. F. KRAUSS,

*Instructor in German and Assistant Librarian.*

(Erlangen University, Germany), '45; Instructor in German, Harvard University, '61-'68; Colorado College, '93.

HENRY W. LAMB,

*Assistant in the Chemical Laboratory.*

Special Student in Assaying, (Colorado College), '81.

FRANK HERBERT LOUD, B. A.,

*Professor of Mathematics and Astronomy.*

B. A. (Amherst), '73; Walker Instructor in Mathematics, Amherst, '73-'76; Colorado College, '77.

THE REV. GEORGE NATHANIEL MARDEN,

*Professor of History.*

HARVEY S. MURDOCH, B. A.,

*Librarian.*

B. A. (Colorado College), '93.

ATHERTON NOYES, B. A.,

*Instructor in English and Greek.*

B. A. (Yale), '85; Colorado College, '92.

MARION MCGREGOR NOYES,

*Instructor in Philosophy and Latin and President's Assistant.*

Radcliffe College, (Harvard Annex), '79-'81; Instructor in Logic and Psychology, Wellesley College, '88-'91; Colorado College '91.

EDWARD S. PARSONS, M. A., B. D.,

*Professor of English.*

B. A. (Amherst), '83; M. A. (Amherst), '86; B. D. (Yale), '87; Colorado College, '92.



HELEN MARGARET RING,

*Instructor in English and Elocution.*

Wellesley College, '81-'83; Columbia College Annex, '86; Associate  
Principal of the Hathaway-Brown School, Cleveland,  
'90-'93; Colorado College, '93

WILLIAM STRIEBY, M. A., E. M.,

*Professor of Chemistry and Metallurgy.*

B. A. (University of the City of New York), '75; E. M. (Columbia  
College School of Mines), '78; M. A. (University of the  
City of New York), '79; Colorado College, '78.

JOSEPH K. SURLS, B. M.,

*Instructor in Mineralogy and Geology.*

B. M. (Lehigh University), '86; Professor of Natural Science, Noble  
Institute, Anniston, Ala., '91-'93; Colorado College, '93.

#### LECTURERS BEFORE THE SENIOR AND JUNIOR CLASSES.

J. T. ESKRIDGE, M. D.,

*Localization of Brain Functions and Hypnotism.*

H. C. CROUCH, M. D.,

*Finer Structure of the Brain and Nervous System.*

THE REV. JAMES B. GREGG, D. D.,

*The Ethical Teaching of the Old Testament.*

THE REV. LIVINGSTON L. TAYLOR,

*Christian Ethics.*

F. R. HASTINGS, M. A.,

*Modern Philosophy.*

*Lady-in-charge at Hagerman Hall,*

MISS FRANCES E. LESSLIE.

*Lady-in-charge at Montgomery Hall,*

MRS. EDWARD WOOLSEY BACON.

## CALENDAR.

1894.

Mar. 21....Wednesday...Easter Recess begins at 1 P. M.  
 Mar. 28....Wednesday...Easter Recess ends at 8:30 A. M.  
 June 5....Tuesday.... { Second Semi-Annual Examinations begin.  
    { First Entrance Examinations.  
 June 10....Sunday.....Baccalaureate Sermon.  
 June 11....Monday.....College Oratorical Contest.  
 June 12....Tuesday.....Cutler Academy Graduation Exercises.  
 June 13....Wednesday...Commencement Exercises.  
 Sept. 18....Tuesday.....Second Entrance Examinations begin.  
 Sept. 19....Wednesday...First half year begins at 8:30 A. M.  
 Nov. 29....Thursday... } Thanksgiving Recess.  
 Nov. 30....Friday..... }  
 Dec. 21....Friday.....Christmas Recess begins at 1 P. M.

1895.

Jan. 8....Tuesday.....Christmas Recess ends at 8:30 A. M.  
 Jan. 31....Thursday.....Day of Prayer for Colleges.  
 Feb. 1....Friday.....First Semi-annual Examinations begin.  
 Feb. 11....Monday.....Second Half-year begins at 8:30 A. M.  
 Feb. 22....Friday.....Washington's Birthday.  
 April 10....Wednesday...Easter Recess begins at 1 P. M.  
 April 17....Wednesday...Easter Recess ends at 8:30 A. M.  
 May 30....Wednesday...Decoration Day.  
 June 4....Tuesday.... { Second Semi-annual Examinations begin.  
    { First Entrance Examinations begin.  
 June 9....Sunday.....Baccalaureate Sermon.  
 June 10....Monday.....College Oratorical Contest.  
 June 11....Tuesday.....Cutler Academy Graduation Exercises.  
 June 12....Wednesday...Commencement Exercises.  
 Sept. 17....Tuesday.....Second Entrance Examinations begin.

# REQUIREMENTS FOR ADMISSION

TO THE

## FRESHMAN CLASS

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS.

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### *Admission by Examination.*

1. IN GREEK.—(a) A thorough knowledge of inflection, with the use of the accents, and the ordinary grammatical constructions. (b) Four books of the *Anabasis*, or three books and Cooke's *Selections* from the *Cyropædia*. (c) Three books of the *Iliad*, with prosody and dialectic forms. (d) Translation at sight of average passages from Xenophon and Homer. (e) The translation into Greek of a passage of connected discourse of moderate difficulty. (The first forty-four exercises in Allinson's *Greek Prose Composition* will indicate the nature of the work required.) (f) Such a brief general view of Greek history as is contained in the revised edition of Pennell's *History*.

2. IN LATIN.—(a) Grammar. Special stress will be laid upon an accurate and ready knowledge of grammatical forms. (b) *Cæsar*: Gallic War, Bks. I–IV. (c) *Cicero*: Seven orations. (d) *Vergil*: *Aeneid*, Bks. I–VI. (e) Translation at sight of easy passages of prose Latin. (f) Prose Composition, (Daniell). (g) An outline knowledge of the history of the Roman Republic.

3. IN ENGLISH.—The candidate will be required to write a short composition, which will be strictly judged from the standpoint of spelling, punctuation, grammar, division into paragraphs, and plan, upon a subject to be

announced at the time of the examination. In 1894, the subject will be chosen from one of the following books, with all of which the applicant is expected to be familiar: Shakespeare's Julius Cæsar and Merchant of Venice; Scott's Lady of the Lake; Arnold's Sohrab and Rustum; Addison's Sir Roger de Coverley Papers; Macaulay's second Essay on the Earl of Chatham; Emerson's American Scholar; Irving's Sketch Book; Scott's Abbot; Dickens' David Copperfield.

The examinations in other studies will also be judged from the standpoint of English. The books prescribed for the examinations in 1895 and 1896 are as follows:

*For 1895.*—Shakespeare's Merchant of Venice and Twelfth Night; Milton's L'Allegro, Il Penseroso, Comus and Lycidas; Longfellow's Evangeline; Addison's Sir Roger de Coverley Papers; Macaulay's Essays on Milton and Addison; Webster's first Bunker Hill Oration; Irving's Sketch Book; Scott's Abbot.

*For 1896.*—Shakespeare's Merchant of Venice and Midsummer Night's Dream; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Longfellow's Evangeline; Macaulay's Essay on Milton; Webster's first Bunker Hill Oration; De Foe's History of the Plague in London; Irving's Tales of a Traveller; Scott's Woodstock; George Eliot's Silas Marner.

After 1893, the student applying for admission will be required to pass an examination in English grammar (Whitney's Essentials of Grammar indicates the field to be covered) and elementary Rhetoric, in addition to the above.

4. IN GERMAN OR FRENCH.—A good elementary knowledge of the language, such as is sufficient for reading easy prose at sight.

IN MATHEMATICS.—(a) Algebra, through simultaneous quadratic equations. (b) Elementary Plane Geometry, or as much as is contained in the first five books of Wentworth's Geometry (revised edition).

[Candidates from schools where Greek is not taught, who have completed the preparation for the Bachelor of Philosophy division of the Freshman class, but prefer to follow the course for the degree of Bachelor of Arts, will be allowed to do so by taking Greek through the whole four years; but they are advised, instead, to diminish the requisite amount of work by substituting in their preparation a second year of German or French, and, if possible, the Freshman Latin or Mathematics, or both, for subjects which are not required for admission to the Bachelor of Arts division. If the Freshman Latin and Mathematics are not attainable in preparation, additional years of German and French will be useful through being credited as Junior electives ]

*Admission by Certificate.*

Candidates who offer satisfactory evidence of having completed the Classical preparatory course adopted by the Colorado State Teachers' Association, will be admitted without condition into the Freshman class, in the course leading to the degree of Bachelor of Arts.

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FOR THE COURSE LEADING TO THE DEGREE OF BACHELOR OF PHILOSOPHY.

*Admission by Examination.*

In Latin, English, German (or French) and Mathematics, the requirements are the same as for the course leading to the degree of Bachelor of Arts. Candidates for ad-

mission to this course need not offer Greek, in place of which they will be examined in the following subjects:

1. IN PHYSICS.—Carhart & Chute's Elements of Physics, or Gage's Elements of Physics, or an equivalent.

2. IN CHEMISTRY.—Williams' Introduction to Chemical Science, or an equivalent.

3. IN BOTANY.—Gray's Lessons (revised edition).

4. IN PHYSIOLOGY.—Martin's Briefer Course, or an equivalent.

5. IN AMERICAN OR ENGLISH HISTORY.—An outline knowledge of leading facts.

For either Botany or Physiology, Appleton's Physical Geography may be substituted.

*Admission by Certificate.*

Candidates who offer satisfactory evidence of having completed the Latin-Scientific preparatory course adopted by the Colorado State Teachers' Association, will be admitted without condition into the Freshman class, in the course leading to the degree of Bachelor of Philosophy.

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FOR THE COURSES LEADING TO THE DEGREE OF BACHELOR OF SCIENCE.

In Physics, Chemistry, Botany, Physiology and American or English History, the requirements are the same as for the course leading to the degree of Bachelor of Philosophy. The following are the additional requirements:

1. IN LATIN.—Four books of Cæsar's Gallic War, with a thorough knowledge of grammar; Latin Composition, at least so much as is contained in the first part of Daniell's Prose Composition.



2. IN ENGLISH.—The same as the requirements for admission to the Bachelor of Arts course (see pp. 15-16).

3. IN GERMAN.—Joynes' German Reader, Chamisso's Peter Schlemihl, Schiller's Jungfrau v. Orleans and Don Carlos, Jensen's Braune Erica, Lessing's Minna v. Barnhelm, Storm's Immensee and Freytag's Journalisten; or the equivalent of these.

4. IN FRENCH.—A good elementary knowledge of the language, such as is sufficient for reading easy prose at sight.

5. IN MATHEMATICS.—(a) Algebra, including the elements of the Theory of Infinite Series, (Binomial, Exponential and Logarithmic Series, with simple applications in computation), and so much of the Theory of Equations as to include Horner's Method of Solution. (b) Geometry, Plane and Solid, as contained in any reputable text-book; for instance the first eight books of Wentworth. (c) Trigonometry, Plane and Spherical. The principles involved in the solution of triangles must be comprehended, and a fair degree of readiness and accuracy in their use acquired.

For either Botany or Physiology, Appleton's Physical Geography may be substituted.

## ENTRANCE EXAMINATIONS.

Examinations for admission to the college will be held on Tuesday and Wednesday, June 5 and 6, 1894, and again on Tuesday and Wednesday, September 18 and 19, 1894, in each case beginning on Tuesday at 9 A. M. No examination will be held between these dates, but delayed examinations may be held after the beginning of

the Fall term, for the accommodation of students who, for good reason, have been unable to attend at the regular time.

For the accommodation of students residing at a distance, examinations will be held under the direction of authorized persons, at various points in and near the State, as need may require. The cities of Cheyenne, Wyo.; Denver, Pueblo, Trinidad, Leadville, Montrose, and Grand Junction, Colo.; and Las Vegas, N. M.; are points where such arrangements can readily be made, and others may be added if necessary. But students who desire examinations at these or other points must notify the President at least three weeks in advance of the time of the regular examination.

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## ADMISSION TO ADVANCED STANDING.

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Students will be received into advanced classes on examination in the studies of the preceding years. The Faculty may, at their discretion, receive certificates from other colleges as evidence that the student has satisfactorily pursued these or equivalent studies.

The attention of students who propose to enter the Junior or Senior class, is called to the notice at the end of the Elective list (page 25), relative to early application for electives.

## COURSES OF STUDY.

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Three courses of study are offered in the college, each subject to considerable variation at the will of the student. The course leading to the degree of Bachelor of Arts corresponds to that which the best Eastern colleges require for the same degree. In the course leading to the degree of Bachelor of Philosophy there is no Greek, and less Latin than in the course for Bachelor of Arts; but the required work of the first two years includes more of Natural Science and Modern Languages. The course leading to the degree of Bachelor of Science is so arranged that special attention may be devoted to any one of five principal lines of study, which give prominence to Mathematics, Physics, Chemistry, Biology and Geology, respectively. A detailed description of these will be found below.

### BACHELOR OF ARTS.

#### FRESHMAN YEAR.

*Mathematics.*—4 hours through the year. First half-year—Solid Geometry and Algebra (Series, Logarithms, and Numerical Higher Equations). Second half-year—Plane and Spherical Trigonometry.

*German or French.*—4 hours through the year; a second year (Course B. see pp.33-34) of whichever of these languages the student offered as part of his preparation for college.

*English* —2 hours through the year; History of the English Language, and Rhetoric (Courses 1 and 2, page 32).

*Elocution.*—2 hours through the year; and declamations, as the instructor may require.

*Greek*.—3 hours through the year. First half-year—Selections from the Odyssey or Iliad; reading at sight. Second half-year—Selections from Lysias; History of Greek Oratory; The Apology and Crito, or Phaedo, of Plato; reading at sight.

*Latin*.—4 hours through the year. First half-year—Livy, Bk. xxii, and Cicero, de Senectute; Latin Composition; reading at sight. Second half-year—Cicero, de Amicitia, and selected Odes of Horace; Latin Composition; reading at sight.

#### SOPHOMORE YEAR.

*Mechanics and Mathematics*.—4 hours through the year. First half-year—Mechanics. Second half-year—Analytical Geometry, through Loci of the Second Order.

*English*.—2 hours through the year. First half-year—Applied Rhetoric. Second half-year—Victorian Literature (Course 5, page 32). The writing and public delivery of one oration is required.

*Greek*.—4 hours through the year. First half-year—the Antigone of Sophocles; History of Greek Tragedy; Æschylus, Prometheus Bound. Second half-year—Euripides, Iphigenia Taurica; Demosthenes, De Corona; reading at sight.

*Latin*.—3 hours through the year. First half-year—Selected Letters of Pliny and the Fourth book of Vergil's Georgics; Latin composition. Second half year—The Second book of the Georgics, and Cicero's Tusculan Disputations, I, II; Latin composition.

*Chemistry*.—8 hours through the year; partly laboratory work and partly recitation.

#### JUNIOR YEAR.

*Logic and Psychology*.—4 hours through the year, including one seminary-hour. First ten weeks—Jevons' Lessons in Logic. Remainder of the year—James' Principles of Psychology; lectures and experiments. In the seminary, theses and discussions.

*Physics*.—4 hours through the year. Heat, Electricity, Magnetism, Light. Lectures, and experiments in Measurement (see page 37).

*Political Economy*.—2 hours through the year. Laughlin's Mill's Political Economy.

*English and Elocution*.—The writing and delivery of two orations.

*Elective Courses.*—Amounting to at least 7 hours through the year, chosen by the student from the list given on pages 24 and 25.

#### SENIOR YEAR.

*History of Philosophy and Ethics.*—5 hours through the year, including one seminary-hour. First half-year—Schwegler's History of Philosophy, outside reading, and lectures. Second half-year—Janet's Theory of Morals, outside reading, and lectures. In the seminary of each course—theses and discussions.

*Astronomy.*—4 hours through the first half-year. Young's General Astronomy.

*English.*—The writing of two orations.

*Elocution.*—2 hours through the year, and the public delivery of two orations.

*Elective Courses.*—Amounting to at least 6 hours for the first half year and 8 hours for the second half-year; chosen by the student from the list given on pages 24 and 25.

#### BACHELOR OF PHILOSOPHY.

##### FRESHMAN YEAR.

*Mathematics, German or French, English, Elocution.*—The requirements are the same as those in the Bachelor of Arts course above.

*Latin.*—As in the Bachelor of Arts course, or, if the student so elects,

*French or German.*—4 hours through the year; Course A (see page 33) of whichever of these languages was not offered as part of the preparation for college.

*Biology.*—3 hours through the year; with additional laboratory practice, at the discretion of the instructor.

##### SOPHOMORE YEAR.

*Mechanics and Mathematics, English.*—The requirements are the same as those in the Bachelor of Arts course above.

*French or German.*—4 hours through the year. The student takes whichever of these two languages was not included in his preparation for college; Course A (see page 33) if he did not have it in Freshman year, otherwise Course B.

*Chemistry.*—9 hours through the year. Roscoe's Elements of Chemistry.

*Geology*.—4 hours through the year. LeConte's Elements of Geology; field excursions.

#### JUNIOR YEAR.

The requirements are the same as those in the Bachelor of Arts course above.

#### SENIOR YEAR.

The requirements are the same as those in the Bachelor of Arts course above.

#### ELECTIVE STUDIES IN THE A. B. AND PH. B. COURSES.

The following Electives, though intended primarily for A. B. and Ph. B. students, are also open to students taking the Sc. B. course. The Electives more especially designed for the latter course will be found below, under the various subdivisions of the Sc. B. work.

Unless otherwise stated, each Elective Study continues through the year, and is open to both Seniors and Juniors. Bracketed courses are omitted in 1894-5.

Hours per week.

- 2 *Modern German Philosophy*, first half-year (page 30).
- 2 *The Philosophic Movement in England*, second half-year (p. 30).
- 2 *Advanced Logic*, second half year (page 30).
- 4 *Calculus*, Differential and Integral (page 36).
- 4 *Projective Geometry*, (page 36).
- 2 *History of Mathematics*, one half year (page 27).
- 4 *General and Applied Chemistry*; Sophomore Chemistry prerequisite (page 41).
- 4 *Chemical Analysis*; Qualitative; (page 41).
- 3 *Chemical Analysis*; Quantitative; (page 42).
- 2 *Applications of Electricity*, or *Theory of Light* (page 39).
- 2 *Laboratory Practice in Physics*; (page 39).
- 2 *Comparative Morphology of Vertebrata*, first half-year (p. 44).
- 3 *Zoology*, second half-year (page 44).
- 4 *Mineralogy*, second half-year (page 45).
- 3 *Economic Geology*, first half-year (page 45).
- 2 *Paleontology*, second half-year (page 46).
- 2 *Political Economy*, advanced; second half-year (page 47).
- 1 *Popular Government*, one half-year (page 47).
- 1 *European Governments*, one half-year (page 47).



- 4 [*American Political History*, 1783-1837; first half-year (page 47)].
- 2 [*American Political History*, 1837-1861; second half-year (p. 47)].
- 4 *English Political History*, 1485-1714; one half-year (page 47).
- 3 *English*, (*Juniors*); Courses 4, 5, 6 and 7, page 32.
- 3 *English*, (*Seniors*); Courses 4, 5, 9 and 10, pp. 32-33.
- 2 *Anglo-Saxon*: Course 8, page 33.
- 2 *Greek History*; Herodotus and Thucydides; first half-year (p. 31).
- 2 *Aristophanes*; *The Clouds*; first half year (page 31).
- 2 *Pindar*, and History of Greek Lyric Poetry (page 31).
- 2 *Roman Elegiac Poets*, or *Juvenal and Martial*; first half-year (page 31).
- 2 *Tacitus*, or *Plautus and Terence*; second half-year (page 31).
- 2 *French*, Course C, page 34; Courses A and B prerequisite.
- 2 *German*, Course C, page 35; Courses A and B prerequisite.
- 2 *German*, Course D, page 35; Courses A, B and C prerequisite.

A student for any degree is usually permitted, further, to take as an elective any study required for another degree that does not appear in the course required for his own degree. But for this purpose, French A counts as 2 hours only, German A as 3 hours.

Seniors and Juniors should mail their choice of electives to Professor W. M. Hall, Colorado Springs, in time to be received there not later than September 11, 1894. The hours for electives (other than Senior and Junior English, French C and German C, which are included in the schedule on pp 34-35) will then be assigned, and electives for which no application has been received may be withdrawn.

## BACHELOR OF SCIENCE.

The studies which are required of all candidates for the degree of Bachelor of Science are as follows:

### FRESHMAN YEAR.

*Mechanics and Analytical Geometry*.—As in the Sophomore year of the A. B. and Ph. B. courses. Four hours per week.

*English*.—As in the Freshman year of the A. B. and Ph. B. courses. Two hours per week.

*Biology*.—As in the Freshman year of the Ph. B. course. Three hours per week.

*French B*.—(See page 33) Four hours per week.

*Chemistry*.—As in the Sophomore year of the Ph. B. course. Nine hours per week in laboratory throughout the year.

## SOPHOMORE YEAR.

*Elocution*.—As in the Freshman year of the A. B. and Ph. B. courses.  
Two hours per week.

*Physics*.—As in the unior year of the A. B. and Ph. B. courses.  
Three hours recitation and about two hours laboratory practice  
per week.

*English*.—As in the Sophomore year of the A. B. and Ph. B. courses.  
Two hours per week.

*German C*.—Readings from works of science: (page 35). Two hours  
per week.

*Mechanical Drawing*.—One hour per week.

## JUNIOR YEAR.

*General Astronomy*.—As in the Senior year of the A. B. and Ph. B.  
courses, but continued through the year. Four hours per week.

*Logic and Psychology*.—As in the Junior year of the A. B. and Ph.  
B. courses. Four hours per week.

*Political Economy*.—As in the Junior year of the A. B. and Ph. B.  
courses. Two hours per week.

## SENIOR YEAR.

*History of Philosophy*.—As in the Senior year of the A. B. and Ph.  
B. courses. Five hours per week.

In Freshman year the required studies tabulated above will occupy the entire time of the student. In the three succeeding years, other required studies, differing according to the nature of the course selected, must be added to those above named; and still other studies are offered in each department as elective. The student will select so many of the latter as will make, together with the studies required of all Sc. B. candidates and those required for the course of his selection, sixteen or seventeen hours of recitation per week. The student's choice of electives is not limited to those offered in the department to which his principal studies belong, but he may take in place of them, so far as not prevented by conflict of hours, any branch which is a required study for any of the college courses, or any elective study in which a class may have been formed by students taking other courses than his own, whether leading to the degree of Sc. B. or to other degrees; provided, however, that the general scientific character of his course be maintained to the satisfaction of the faculty.

## ADDITIONAL REQUIREMENTS AND ELECTIVES. \*

### COURSE IN PURE MATHEMATICS AND ASTRONOMY.

SOPHOMORE YEAR.—Calculus (required). 4 hours per week. Projective Geometry (elective); 2 hours per week.

JUNIOR YEAR.—Laboratory Physics (required); 2 hours per week. Higher Algebra and Plane Curves (elective); 3 hours per week.

SENIOR YEAR.—Theory of Substitutions (elective); 2 hours per week. Analytical Geometry of Two and Three Dimensions (elective); 2 hours per week. Mathematical Astronomy (elective); 2 hours per week.

### COURSE IN PHYSICS.

SOPHOMORE YEAR.—Calculus (required); 4 hours per week. Molecular Physics (elective); 2 hours per week.

JUNIOR YEAR.—Applications of Electricity (required); 2 hours per week. Laboratory Physics, (required); 2 hours per week. Analytical Mechanics (elective); 2 hours per week. History of Mathematics, (elective) 2 hours per week for half the year.

SENIOR YEAR.—Theory of Light (required); 2 hours per week. Electricity and Magnetism (elective); 2 hours per week.

### COURSE IN CHEMISTRY.

SOPHOMORE YEAR.—Qualitative Analysis (required); 4 hours per week. Organic Chemistry (required); 2 hours per week.

JUNIOR YEAR.—Advanced Chemistry (required); 4 hours per week. Quantitative Analysis (elective); 4 hours per week. Molecular Physics (elective); 2 hours per week.

SENIOR YEAR.—Theoretical Chemistry, (elective); 3 hours per week. Applied Chemistry (elective); 2 hours per week.

### COURSE IN BIOLOGY.

SOPHOMORE YEAR.—Structural and Systematic Botany of Cryptogams and Phenogams (required); 4 hours per week. Zoology (required); 3 hours per week.

JUNIOR YEAR.—Comparative Anatomy of Invertebrates (required); 3 hours per week. Geology (required); 4 hours per week.

SENIOR YEAR.—Comparative Anatomy of Vertebrates (required); 2 hours per week. Comparative Embryology (required); 2 hours per week.

## COURSE IN GEOLOGY.

SOPHOMORE YEAR.—Geology (required); 4 hours per week. Mineralogy (required); 2 hours per week.

JUNIOR YEAR.—Economic Geology and Lithology (required); 3 hours per week. Invertebrate Paleontology (required); 2 hours per week.

SENIOR YEAR.—Geological Surveying (required); 3 hours per week. Vertebrate Paleontology (required); 2 hours per week.

Some of the studies offered as electives in this scheme can only be taken by students who have previously completed certain antecedent studies. Calculus and Analytical Mechanics are prerequisite to either Mathematical Astronomy, or Electricity and Magnetism. Higher Plane Curves is prerequisite to Geometry of Three Dimensions. Qualitative must precede Quantitative Analysis, and Advanced Chemistry is needed for Theoretical Chemistry. The Anatomy or Paleontology of Invertebrates must precede that of Vertebrates; and a general study, like those entitled Astronomy or Geology in the above table, is prerequisite to a special study of the same name, as Mathematical Astronomy, or Economic Geology.

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 PHILOSOPHY.
 

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This course extends over the Junior and Senior years, and gives the student a knowledge of the development of thought in the several departments of Philosophy.

1. LOGIC.—Jevons' Elementary Lessons. Four hours.—MISS NOYES.
2. PSYCHOLOGY.—James' Principles of Psychology. Lectures, Recitations and Experiments. Three hours.—PRESIDENT SLOCUM.

*Lectures:*

- (a) Introductory series.—PRESIDENT SLOCUM.
- (b) Psycho-physics.—PRESIDENT SLOCUM.
- (c) Finer Structure of the Brain and Nervous System.—  
DR. H. C. CROUCH.
- (d) Localization of Brain Functions.—DR. J. T. ESKRIDGE.
- (e) Memory and Imagination.—MISS NOYES.
- (f) Hypnotism.—DR. J. T. ESKRIDGE.

3. **PSYCHOLOGICAL LABORATORY.**—Opportunity will be afforded for the conducting of experiments in special lines.
4. **PSYCHOLOGICAL SEMINARY.**—The leading subjects in Modern Psychology, Theses and Discussions. One hour.—**PREST. SLOCUM.**
5. **HISTORY OF PHILOSOPHY.**—Lectures, Recitations and Conferences. Four hours.—**PREST. SLOCUM.**

*Lectures:*

- (a) Study in Comparative Religions.—**PREST. SLOCUM.**
- (b) Greek Philosophy. Twenty Lectures.—**PREST. SLOCUM.**
- (c) Modern Philosophy. Ten Lectures.—**MR. F. R. HASTINGS.**

(1) The Emancipation from Scholasticism; (2) Descartes and his School; (3) The Pantheism of Spinoza; (4) Leibnitz; (5) The Empiricism of Locke; (6) Berkeley. French Sensationalism; (7) The Scepticism of Hume; (8) Kant and his Criticism; (9) The Kantian Basis of Ethics; (10) From Kant to Schopenhauer—a Sketch; (11) Comte and Positivism; (12) Spencer and the Philosophy of Evolution.

These Lectures will be followed by a series of conferences conducted by President Slocum.

6. **METAPHYSICAL SEMINARY.** One hour.—**PREST. SLOCUM.**

Presentation of papers and discussion of the following subjects:

- (a) Ten Great Religions of the World.
- (b) The Psychological Basis of Religious Faith.
- (c) The Psychological Basis of Aesthetics.
- (d) Philosophical Thought in England during the Nineteenth Century.
- (e) Evolution: its History, Development and Results.

7. **ETHICS.**—Janet's Theory of Morals. Lectures. Theses and Discussions. Four hours.—**PREST. SLOCUM.**

*Lectures:*

- (a) Ten Fundamental Principles of Ethics. Twelve Lectures.—**PREST. SLOCUM.**
- (b) The Ethical Teaching of the Old Testament. Three Lectures.—**REV. JAMES B. GREGG, D. D.**
- (c) Christian Ethics. Three Lectures.—**REV. LIVINGSTON L. TAYLOR.**



## 8. ETHICAL SEMINARY. One hour.—PREST. SLOCUM.

Presentation of papers and discussions upon the following subjects:

- (a) Modern Social and Sociological Problems.
- (b) The Ethical View of Citizenship.
- (c) A Study of Educational Theories from an Ethical Standpoint.

## 9. ELECTIVE COURSES:

- (a) Modern German Philosophy. First half of Senior year. Two hours.—PRESIDENT SLOCUM.
- (b) The Philosophical Movement in England. Second half of Senior year. Two hours.—PREST. SLOCUM.
- (c) Advanced Logic. Second half-year. Two hours.—MISS NOYES.

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## GREEK.

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The studies in this department extend through four years, of which the first two are required of all candidates for the degree of Bachelor of Arts, while the work of the Junior and Senior years is elective.

The course is so arranged as to give the student an introduction to the several great departments of Greek Literature; and each author is studied from the literary as well as from the linguistic side. Particular care is taken to have the student acquire facility in reading Greek, and great stress is laid on reading at sight, throughout the course. At the same time, accuracy is insisted on, and the student is required to translate into idiomatic English.

### FRESHMAN YEAR.

1. *Homer*—Selections from the Iliad or Odyssey; reading at sight. Three hours, first half year.
2. *Lysias*—Selections; History of Greek Oratory. *Plato*—Apology and Crito, or Phædo; reading at sight. Three hours, second half year.

### SOPHOMORE YEAR.

3. *Sophocles*—Antigone; History of Greek Tragedy. *Æschylus*—Prometheus Bound. Four hours, first half-year.



4. *Euripides*—*Iphigenia Taurica*, *Demosthenes*, *De Corona*; reading at sight. Four hours, second half-year.

ELECTIVE.

5. *Greek History*—*Herodotus* and *Thucydides*. Two hours, first half-year.

6. *Aristophanes*—*The Clouds*. Reading at sight. Supplementary reading from other works. Lectures. Two hours, first half-year.

7. *Pindar*—*History of Greek Lyric Poetry*. Supplementary reading from the lyric poets. Lectures. Two hours, second half-year.

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L A T I N .

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The course in Latin is intended to give (1) a good reading knowledge of the language; (2) a fair acquaintance with Roman literature, history and antiquities. Instruction is given mainly by recitations, but such work is supplemented by occasional lectures by the instructor. Much attention is devoted to sight translation and to Latin prose composition. The use of idiomatic English in translating is strenuously insisted upon, and written translations are frequently required.

In 1894-95, the first half of the Freshman year will be devoted to *Livy*, Bk. XXII, and *Cicero de Senectute*; the second half, to *Cicero de Amicitia*, and selected Odes of *Horace*.

In the first half of the Sophomore year, selected letters of *Pliny* and the Fourth book of *Vergil's Georgics* will be read; in the second half, the Second book of the *Georgics* and *Cicero's Tusculan Disputations*, I, II.

The following elective courses are offered to Juniors and Seniors:

FIRST HALF-YEAR.—(1) The Roman Elegiac Poets, or (2) The principal Satires of *Juvenal*, with selected Epigrams of *Martial*.

SECOND HALF-YEAR.—(1) The Annals of *Tacitus*, Bks. I-IV, or (2) *Terence*, *Andria*, and *Adelphoe*, and *Plautus Menæchmi* and *Captivi*.

## ENGLISH.

The following courses are offered:

1. *History of the English Language*.—One half of the first half-year. Two hours a week. Required of Freshmen. Lounsbury's *History of the English Language*, Part I.

2. *Advanced Rhetoric*.—Essays. Remainder of the year. Two hours a week. Required of Freshmen. Genung's *Rhetoric and Rhetorical Analysis*.

3. *Applied Rhetoric*.—Composition work. Newcomer's *English Composition*, with constant reference to Genung's *Rhetoric*. Frequent themes in and out of class-room. One half-year. Two hours a week. Required of Sophomores.

4. *American Literature*.—No text-book used. Authors studied: Irving, Hawthorne, Bryant, Longfellow, Emerson, Thoreau, Lowell, Holmes, Whittier. Each student writes an exhaustive essay on one author, for criticism by the class. One half-year. Two hours a week. Required of Sophomores. Open to Juniors and Seniors. Omitted in 1894-95. Alternates with Course 5.

5. *Victorian Literature*.—No text-book used. Authors studied: Mrs. Browning, Tennyson, D. G. Rosetti, Matthew Arnold, Robert Browning, John Henry Newman, Carlyle, Ruskin, Morris, Swinburne, Thackeray, Dickens, George Eliot. Each student writes an exhaustive essay on one author, for criticism by the class. One half-year. Two hours a week. Required of Sophomores. Open to Juniors and Seniors. Alternates with Course 4.

6. *English Literature*.—From the Anglo-Saxon conquest to Milton, inclusive. No text-book used. The principal literature of the Anglo-Saxon and Early English periods taken up rapidly, and Chaucer, Spenser, Bacon and Milton studied carefully. Each student writes an exhaustive essay on some subject in the course, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors.

7. *The Elizabethan Drama*.—Marlowe, Ben Jonson, Beaumont and Fletcher, Webster, studied with Thayer's *Best Elizabethan Plays*. The bulk of half-year devoted to Shakespeare. A number of his plays read rapidly; *The Tempest*, *Richard II*, and *Lear*

critically. Each student writes an exhaustive essay on some subject in the course, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors.

8. *Anglo-Saxon*.—Two hours a week through the year. Elective for Juniors and Seniors. Sweet's Anglo-Saxon Primer. Selections from Anglo-Saxon Literature.

9. *English Poetry*.—From Dryden to Wordsworth. No text-book used. Authors studied: Dryden, Pope, Thomson, Gray, Cowper, Burns, Scott, Byron, Moore, Shelley, Keats, Coleridge, Southey, Wordsworth. Each student writes an exhaustive essay on one author, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors.

10. *English Prose*.—From Bunyan to Sidney Smith. No text-book used. Authors studied: Bunyan, Addison, Swift, Goldsmith, Johnson, Burke, Macaulay, Lamb, DeQuincey, Sidney Smith. Each student writes an exhaustive essay on one author, for criticism by the class. One half-year. Three hours a week. Elective for Juniors and Seniors

## FRENCH LANGUAGE AND LITERATURE.

### FRENCH A:

*First Half-year*—Grammar; Composition; Reading of easy prose selections. Four hours.

*Second Half-year*—Grammar continued; Composition; Rapid reading and reading at sight. Four hours.

### FRENCH B:

*First Half-year*—Reading of classic and modern French authors—Moliere, Corneille, Racine and Lafontaine, alternating with Sand, Greville, Legouve, Sandeau, Daudet, About, etc. A short study of the life of each author accompanies the reading of his works. Some book in idiomatic and simple English is used for translation into French. Four hours.

*Second Half-year*—Reading continued: Voltaire, Madame de Stael, St. Pierre, Chateaubriand, alternating with authors of our own time. Short essays in French on the various characters in the works which have been read, or on their

authors. Lectures on the outlines of French literature. Fables and prose committed to memory. Four hours.

#### FRENCH C:

*First Half-year*—Study of the life and works of the most prominent authors of the XIXth century, as Hugo, Lamartine, de Vigny, de Musset, etc. Two hours.

*Second Half-year*—Study of the most striking figures in French history; as, *e. g.* St. Louis, Jeanne D'Arc, Louis XI, Henri IV, Richelieu, Louis XIV, etc.; with an outline of the intervening periods. Essays by the class. Two hours.

[French C is an elective for students who have completed Courses A and B.]

Students who offer elementary French (corresponding to French A in the list above) as part of their preparation for admission to the Freshman class, take French B in Freshman year. Candidates for the degree of Bachelor of Philosophy who, having offered German A for admission, take German B in Freshman year, may take French A also as a substitute for Freshman Latin; such students take French B in Sophomore year; and others in the Ph. B. division, whose language first offered was German, take French A in Sophomore year.

### GERMAN LANGUAGE AND LITERATURE.

#### GERMAN A:

*First Half-year*—Grammar; Composition; Reading of easy prose selections. Four hours.

*Second Half-year*—Grammar continued; Composition; Prose selections for rapid reading; Reading at sight. Four hours.

#### GERMAN B:

*First Half-year*—Schiller; reading of one or more of the dramas. Lectures on German Literature by the instructor. Four hours.

*Second Half-year*—Modern or romantic authors; Freytag, Riehl, Storm, Eichendorff, etc.; Lessing, Minna v. Barnhelm,

Lectures by the instructor. Essays by the class. Four hours.

#### GERMAN C:

*First Half-year*—Goethe; study of Goetz von Berlichingen, Iphigenia, Tasso or Faust (first part), at the discretion of the instructor. Essays by the class. Two hours.

*Second Half-year*—Schiller: Wallenstein, with a study of contemporary history, or the Ballads of Goethe and Schiller compared, and essays by the class.

Or (For students in the Sc. B. course).

*First Half-year*—Reading of Scientific German in preparation for the course leading to the degree of Bachelor of Science.

[German C is an elective for students who have completed German A and B.]

#### GERMAN D:

*First Half-year*—Middle High German; Grammar; Selections from the Niebelungenlied. Two hours.

*Second Half-year*—Old High German; Grammar and Reader. Two hours.

Students who offer elementary German (corresponding to German A in the list above) as part of their preparation for admission to the Freshman class, take German B in Freshman year. Candidates for the degree of Bachelor of Philosophy who, having offered French A for admission, take French B in the Freshman year, may take German A also as a substitute for Freshman Latin; such students take German B in Sophomore year; and others in the Ph. B. division, whose language first offered was French, take German A in Sophomore year.

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### MATHEMATICS AND ASTRONOMY. •

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After the completion of Elementary Geometry (solid and spherical) the Freshman year is devoted, by candidates for the degree of A. B. and Ph. B., to Plane and Spherical Trigonometry and to advanced Algebra. The topics under the latter head which receive



special attention are Series (including the Binomial Formula), Logarithms and Numerical Higher Equations. All the studies thus far named must have been included in the preparatory course of students expecting to take the degree of Sc. B., and are accordingly included in the requirements for admission to college for such students, (p. 19). Again, the pure mathematical studies of Sophomores in the courses leading to the degrees of A. B. and Ph. B. coincide with those of Freshman aiming at that of Sc. B., and consist of the investigation, by the method of Analytical Geometry, of the properties of Conic Sections. The work in this branch is limited to the second half of the year, and completes the required course in pure Mathematics, except for Sc. B. candidates; although in Astronomy, a half-year's study is required in all courses. In those which lead to the degrees of A. B. and Ph. B. this Astronomy belongs to the first half of Senior year. The text book used is Young's General Astronomy.

The courses prescribed for the degree of Sc. B. differ in the amount of mathematical work assigned; but where mathematics or Astronomy is made prominent, the Differential and Integral Calculus must be studied through the Sophomore year; while the textbook work in Astronomy above described must be done in the first half of Junior year and followed by a second half year in which observatory practice, will be given a leading place. None of the remaining branches included in the mathematical course is required, but some of them will be elected by any student who has made this course his choice. They comprise in the Sophomore year, Projective Geometry (when the treatment will be based on Cremona's or Reye's treatise), in Junior year, besides History of Mathematics, Higher Algebra and Higher Plane Curves (in which selected portions of Salmon's works will be taken up,) and in Senior year a course in continuation of that last named,—pursuing further the Theory of Curves and entering upon the Geometry of Three Dimensions,—another in the Theory of Substitutions, based upon Netto, and finally Mathematical Astronomy as presented in Dziobek's treatise.

Of the above named studies, the History, Calculus and Projective Geometry are offered as electives to Juniors and Seniors in the courses leading to the degrees of A. B. and Ph. B.



## PHYSICS.

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During the first half of the Sophomore year in the A. B. and Ph. B. courses, and during the first half of the Freshman year in the Sc. B. courses, all students pursue the study of Elementary Mechanics, preparatory to the general course in Physics, known as "Junior Physics."

The study of Junior Physics extends through one year and is required of students in all courses. In all science courses it appears as a Sophomore study. As given this year, it includes Heat, Electricity, Magnetism, and Light. The more advanced parts of these subjects are taught by lectures, in which the effort is made to embody all important discoveries of recent date, so far as they can be grasped by students of this grade of advancement. With a view to reduce somewhat the time taken up by lectures, students are required to review the elements of the subject on hand from a text-book. Garnett's *Elementary Treatise on Heat*, and Poyser's *Manual of Magnetism and Electricity* are used this year.

The aim always kept in view is not only to give students a theoretical knowledge of the subject, but also to offer them facilities for laboratory practice and acquiring skill in experimentation. The practical work in this class consists, mainly, of measurements, as follows:

1. Determination of the diameter of fine tube filled with mercury.
2. Determination of the apparent expansion of mercury by the weight thermometer.
3. Determination of the coefficient of linear expansion of iron.
4. Determination of the latent heat of steam.
5. Determination of the specific heat of lead by the ice calorimeter.
6. Determination of the specific heat of a substance by the method of mixtures.
7. Determination of the temperature of maximum density of water, and testing the zero-point of thermometers.

8. Experimental determination of the moment of inertia of a body with respect to a given axis.
9. Determination of the horizontal component of the earth's magnetic intensity.
10. Comparison of the strength of a given magnetic pole with the horizontal component of the earth's magnetism.
11. Determination of the dip by the earth inductor.
12. Determination of the constant (reduction factor) of a tangent galvanometer by electrolysis.
13. Calibration of a galvanoscope.
14. Determination of the equipotential lines of a metallic plate under given conditions.
15. Measurement of resistances by the B. A. wire-bridge.
16. Determination of resistance of a coil by means of a resistance box and tangent galvanometer.
17. Determination of resistance of a battery by a box of resistance coils and tangent galvanometer.
18. Determination of battery resistance by Mance's method, and of galvanoscope resistance by Thomson's method.
19. Determination of battery resistance by Thomson's method.
20. Proof of Ohm's Law.
21. Comparison of electro-motive forces of cells by the high resistance method.
22. Comparison of electro-motive forces of cells by the equal deflection method.
23. Comparison of electro-motive forces of cells by Latimer-Clark's method.
24. Comparison of electro-motive forces by the quadrant electrometer.
25. Determination of the capacity of a condenser.
26. Determination of the permeability of iron by Rowland's method.
27. Measurement of the magnifying power of a microscope.

28. Measurement of the index of refraction of a prism.
29. Measurement of the index of refraction of a plate by means of a microscope.
30. Measurement of the focal length of a concave mirror.
31. Determination of the focal lengths of a convex and of a concave lens.
32. Measurement of the wave-length of homogeneous light by means of a grating.
33. Detection of chemical elements in a mixture of substances by means of the spectroscope.
34. Identification of some of the Fraunhofer lines.
35. Determination of the number of vibrations per second of a tuning-fork by the graphic method.
36. Determination of the number of vibrations per second by means of the siren.
37. Verification of the laws of vibrating strings.

In addition to "Junior Physics," Sc. B. students electing the course in Physics or that in Pure Mathematics and Astronomy are required to take Laboratory Physics one afternoon per week, throughout their Junior Year. This is also offered as a Senior elective to A. B. and Ph. B. students. As given this year, the laboratory practice includes experiments on the capacities of condensers, on the laws for combination of condensers, on the determination of battery resistances by condensers, on the comparison of electro-motive forces by the quadrant electrometer, on the optical and audible demonstration of the oscillations occurring in the Leyden jar spark, and on Hertzian undulations.

Of Sc. B. students electing the course in Physics, the study of Applications of Electricity is required during the Junior year, while Analytical Mechanics is offered as an elective. In the Senior year such students are required to take up the theory of Light, and they may elect an advanced course in the theory of Electricity and Magnetism.

## CHEMISTRY.

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### REQUIRED WORK.

*Sophomore Class, A. B. Course. Beginning Chemistry.*—The work of the class includes four recitations and two hours of laboratory work per week, throughout the year. Laboratory work and, occasionally, lectures may take the place of recitations, but at such times there will be required additional hours in the Laboratory in lieu of the preparation of lessons. The work of the year is given chiefly to the study of Inorganic Chemistry. It includes general Descriptive Chemistry with certain laws applicable to chemical phenomena, the preparation in the Laboratory of elementary bodies and their more important compounds, and the verification of statements in the text books, measurements, manipulation, etc. Sufficient practice is given in Qualitative Analysis to enable the student to detect many of the more common acids and bases. The experimental work is made very thorough and exacting, to insure a practical familiarity with the substances studied and with the methods of manipulation practiced in laboratories. It is deemed highly important that habits of careful work and accurate observation shall be acquired at the beginning of the student's scientific training.

*Sophomore Class, Ph. B. Course. Second Year Work.*—The subject is so presented as to give a general knowledge of Chemistry, and to furnish a basis for the scientific studies of the Junior and Senior years. Nine hours per week during the year are required. Recitations and lectures are employed, as occasion may require, for the purposes of instruction; and work in the Laboratory is systematically and constantly pursued under the supervision of the instructor. The experimental work supplements and illustrates, as far as practicable, the theoretical and descriptive portions of the subject; and includes a practical though quite abbreviated acquaintance with Analytical and Synthetic Chemistry. The principles of Chemistry, its practical application in the arts, and its use in the explanation of the phenomena of daily life, are brought prominently forward in the course, and the student is also trained to obtain readily from technical works the data and details familiar only to the professional chemist. Special series of experiments will, from time

to time, be required; and written reports upon the work must be handed in. The preparation of abstracts from books on Chemical Technology and Sanitary Science will occasionally take the place of the general work. Roscoe's Elements of Chemistry will be used for study and reference during this year. The experimental work corresponds nearly to that given in Reynolds' Experimental Chemistry.

#### ELECTIVE WORK (ADVANCED).

The following electives have been arranged for students who wish to continue the chemical work of the Sophomore year—Ph. B. Course:

(a) *General and Applied Chemistry*.—This course follows, in the main, the outlines of the work of the required course. Theoretical Chemistry is much more fully treated, and more elaborate and delicate experiments are arranged to illustrate and explain general laws. The more recent advances, both in theoretical and applied chemistry, are noted and discussed in connection with the various elements, or groups, under consideration. The applications of chemistry to the arts are studied in greater detail, and the modern uses of chemistry in the sciences of Biology, Medicine, Geology, etc., are treated as fully as the length of the course will permit. Instruction is given in part by lectures, but references are freely made to the works of Remsen, Fownes, Roscoe and Schorlemmer, etc., for particular subjects. Certain works on Sanitary Science are assigned for private study and the preparation of abstracts and written discussions. In lieu of the usual preparation of lessons for recitation, students are required to perform in the Laboratory the experiments given in the lectures, and such others, in addition, as may be outlined for practice. The hours of lecture and recitation are four per week, continued for one year. The hours required for laboratory work are six per week for the same period.

(b) *Qualitative Chemical Analysis*.—This course is open only to students who, by previous study of General Chemistry, are properly qualified for the work. The time occupied by the course is one year, and the hours required for laboratory work are equivalent to two consecutive hours, four days per week. The lectures will be given at such hours and at such intervals as shall be best suited to the class. A text-book for reference and study will be assigned at the beginning of the year. The work of the course comprises experimental drill in obtaining characteristic reactions of the more common elements, study of empirical formulæ and symbolic expres-



sion of reactions, solution of substances, separation of groups of elements, and finally, analysis—first of simple salts, and later of complex mixtures. The analytical work is confined almost wholly to inorganic substances, but includes certain common organic acids and a few organic bodies of general and medical use. The final examination is both experimental and theoretical in character.

(c) *Quantitative Chemical Analysis*—The course in Quantitative Analysis presupposes a knowledge of General Chemistry and Qualitative Analysis. In it are included the volumetric measurement of liquids, the accurate use of fine balances, and the general subject of stoichiometry. In the earlier part of the course, the student is made familiar with gravimetric and volumetric determinations of single elements, by approved methods. Complete analysis of simple salts follow next in order. Salts, alloys, minerals, ores, slags, and mineral water, are among the substances required to be analyzed by the student. The analysis of inorganic substances only is studied in this course. As a final part of his work in the course, the student is given practice in a few of the commercial or rapid determinations of the constituents of ores and minerals.

The course occupies one year for its completion. The laboratory work occupies three consecutive hours, five days per week. Lectures will be given at intervals through the course. The textbook for this year will be *Quantitative Analysis*, by Cairns.

#### COURSE IN CHEMISTRY.

*Leading to the Degree of Bachelor of Science*—An outline of this course is given on page 27. It includes as required studies the electives marked (a) and (b), outlined above, Organic Chemistry, and Theoretical Chemistry. The electives in the line of Chemistry which may also be taken in this course are:—Quantitative Analysis, (the same as (c) above), Molecular Physics, (as given in the course in Physics), and Applied Chemistry. Other subjects must be chosen from the electives offered in other courses, to make up the full number of schedule hours required.

#### DEPOSITS, CHEMICALS, SUPPLIES, ETC.

The cost of chemicals, glassware, and supplies used by students in any of the courses mentioned, must be defrayed by themselves. A deposit, estimated as probably sufficient to cover the ordinary expenses of the work, must be made by each student, with the instructor, at the beginning of the term. Any balance remaining



will be returned at the completion of the course. Glassware and general supplies (but not chemicals), if in condition for reissue, may be returned, subject to a small discount. The deposit required for each course is as follows:

General Chemistry—Preparatory course.....	\$4 00
General Chemistry—Sophomore year, A. B. course.....	5 00
General Chemistry—Sophomore year, Ph. B. course.....	6 00
General Chemistry—Elective course.....	10 00
Qualitative Analysis—Elective course.....	15 00
Quantitative Analysis—Elective course.....	15 00
Organic Chemistry—Elective course.....	10 00

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## BIOLOGY.

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*Elementary Biology.*—Required of Freshmen in the Bachelor of Philosophy and Bachelor of Science divisions. The course extends through the year; three laboratory exercises a week, usually of two hours each, with additional work at the discretion of the instructor. In the first half year, the lower forms of plant and animal life are studied, such as Amœba, Infusoria, Corals, Echinoderms, Yeast, Mould, Spirogyra, etc. In the second half-year, following the plan of the previous work, higher forms are studied, such as Exogens, Endogens, and Gymnosperms; Crayfish, Clam, Snail, Frog, Cat, etc.

*Structural and Systematic Botany.*—Required of Sophomores in the Biology division of the Sc. B. course; four times a week throughout the year. The first half-year is devoted to the study of the Cryptogamia. Aside from the collecting of plants, and occasional prescribed readings or recitations, the work is performed in the laboratory. As reference-works, the writings of Sachs, De Bary, Bessey, Cooke, Fries, etc., are used. The second half-year is given to the Flowering Plants, its work including recitations, plant description and analysis, and the formation of an herbarium. A minimum of forty species of flowering plants correctly determined, described, and mounted, is a requirement in this study. Text books, Gray's Lessons and Coulter's Rocky Mountain Botany.

*Zoology.*—Required of Sophomores in the Biology division of the Sc. B. course. Recitations and laboratory work; three times a week throughout the year. Text-book, Packard's Zoology.

*Comparative Anatomy of Invertebrates.*—Required of Juniors in the Biology division of the Sc. B. course; three times a week

throughout the year. Laboratory work, with references to writings of Huxley, Gegenbaur, etc.

*Comparative Anatomy of Vertebrates*.—Required of Seniors in the Biology division of the Sc. B. course; twice a week throughout the year. Laboratory work, with references to the writings of Flower, Wiedersheim, Huxley, Cuvier, etc.

*Comparative Embryology*.—Required of Seniors in the Biology division of the Sc. B. course; twice a week throughout the year. Recitations and laboratory work. Text-books, Hertwig, Korschelt, and Heider's Text-book of Embryology, (translated by Mark and Woodworth).

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## GEOLOGY.

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The study of Geology is peculiarly attractive in this section of the State. In few localities can be found the exposed strata of so many and diverse geological ages, or so varied an assemblage of rock and mineral species. Fossils of both earlier and later formations are abundant in many localities. Orogenic forces, faults, veins, dikes, flood plains, caves, river-erosion, sand-carving and glacial action are all well illustrated near at hand.

To the wealth of geological illustration that nature presents to the student in this district, the College Museum and a selection of lantern-slides add many instructive specimens and views.

*Geology*.—Required of Sophomores in the Ph. B. division and of Sophomores in the Geology course and Juniors in the Biology course of the Sc. B. division; four times a week through the year. Recitations and special exercises, supplemented by excursions to points of geological interest. In the first half-year, Dynamical and Structural Geology are studied; in the second, Historical Geology. Text-book, LeConte's Elements of Geology.

*Mineralogy*.—Required of Sophomores in the Geology course of the Sc. B. division; twice a week through the year. This study is approached both from the physical and from the chemical side. The work consists, in part, of recitations in Descriptive Mineralogy, but more largely of laboratory practice in the determination of minerals. Text-book, Dana's Mineralogy and Petrography.

*Lithology*—Required of Juniors in the Geology course of the Sc. B. division; three times a week through the second half-year. Recitations from prescribed parts of Rosenbusch's Microscopical Physiography of the Rock-Making Minerals (Idding's translation); preparation of microscopical sections of rocks, followed by determinative work.

*Economic Geology*—Required of Juniors in the Geology course of the Sc. B. division; three times a week through the first half-year. Recitations, with references to illustrative specimens, and occasional visits to geological localities of special economic interest and to industries based on geological resources. Text-book, Tarr's Economic Geology.

*Invertebrate Paleontology*—Required of Juniors in the Geology course of the Sc. B. division; twice a week throughout the year. Laboratory study of fossils of principal groups is preceded, for the most part, by a study of recent forms of the same or allied groups. The student is guided in the consultation of leading authorities, such as Zittel, Steinmann and Doederlein, Bernard, Nicholson, Tryon, etc.

*Vertebrate Paleontology*—Required of Seniors in the Geology course of the Sc. B. division; twice a week throughout the year. Laboratory studies in the Comparative Osteology, Taxonomy, and Evolution of the Vertebrata. The student makes use of the general works and monographs of Flower, Zittel, Huxley, Cuvier, Leidy, Cope, Marsh, etc.

*Geological Surveying*—Required of Seniors in the Geology course of the Sc. B. division; three times a week throughout the year. Topographical and geological survey of assigned area; construction of topographical maps and of geological maps and sections; collection and identification of its fossils; special study of the relations of its terranes to those of geologically allied areas elsewhere. All results to be embodied, at the end of the year, in a formal thesis, or report.

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## ECONOMIC AND POLITICAL SCIENCE.

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The Juniors take a required course (two hours through the year) in Elementary Political Economy, using Laughlin's Mill as the text-book.

An elective course in Political Economy pursues selected subjects in detail. In 1893-4 the subjects are Money and Taxation; in 1894-5, Railways, Socialism, and the Rental-Tax. The course in 1894-5 will be two hours through the second half-year, open to Seniors and Juniors.

An elective course in Government, two hours through the second half-year, will be open to Seniors and Juniors in 1894-5. The first part of the course examines the elements and safeguards of civil liberty, with particular reference to the government of the United States; the second part discusses the principal governments of Europe. Either part may be taken without the other.

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## HISTORY.

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The courses in History are elective, and are varied from year to year. In 1894-5, Political History of England from 1485 to 1714, with Green's (large) History of England as the text-book; four hours through the first half-year. Open to Seniors and Juniors.

The course of Political History of the United States from 1793 to 1861, given in 1893-4, will be repeated in 1895-6.

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## ORATORY.

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The purpose in this department is to develop the individual oratorical forces of the student. The work looks towards increased strength through self-expression rather than the direct effort to eliminate faults. The student is encouraged to find out his power.

The work consists of the Philosophy and Art of Expression taught in classes during the Freshman and Senior years. There is also individual practice on original orations, which are delivered before the College, in Sophomore, Junior and Senior years. All students have regular drill in Voice Culture and in the principles of Gesture. The education of the Imagination and of the Emotions is especially sought.

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## PRIZES AND HONORS.

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College Scholarship Honors of two grades are awarded in June for excellence in the work of the year. The Honor List for 1892-3 was as follows:

## HIGH HONORS.

HARVEY S. MURDOCH, of Okolona, Mississippi, *Class of 1893.*  
 WINONA BAILEY, of Leadville, Colorado, *Class of 1896.*  
 MASSIE ETHEL GANDY, of Colorado Springs, *Special Student.*

## HONORS.

*Class of 1893:*

HORACE S. COOPER, of Colorado Springs.  
 EDWARD D. HERON, of Colorado Springs.  
 TAIZO NAKASHIMA, of Hayase, Japan.

*Class of 1894:*

WILLIAM L. TIBBS, of Smithfield, Pennsylvania.

*Class of 1895:*

NETTIE M. CAREY, of Greeley, Colorado.  
 WILLIS E. HARTSHORN, of Colorado Springs.  
 FRANK W. WOODS, of Colorado Springs.

*Class of 1896:*

FRANK S. BAYLEY, of Denver.  
 ANNA PEARL COOPER, of Colorado Springs.  
 JESSIE G. DUDLEY, of Colorado Springs.  
 BESSIE G. HAY, of Pueblo, Colorado.  
 MARY K. WALLACE, of Denver.

*Special Student:*

HENRY J. OLMSTED, of Arlington Heights, Illinois.

The College Oratorical Prize for an original oration, is awarded in June to the winner of a public competition. In June, 1893, it was given to

WINONA BAILEY, of Leadville, Colorado.

A prize for proficiency in Latin is offered annually for competition among members of the Freshman Class. It consists of ten dollars' worth of books. It was awarded in May, 1893, to

BESSIE G. HAY, of Pueblo, Colorado.

A prize for proficiency in Greek, consisting of ten dollars' worth of books, is offered annually for competition among members of the Fourth Academy Class. It was awarded in May, 1893, to

MILNOR ROBERTS, of Colorado Springs.

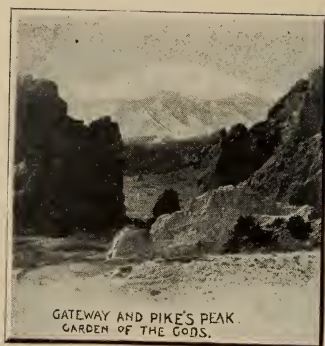
# SCHEDULE OF RECITATIONS.

Hour.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
1 8:30	I. Latin. II. English. III. Latin. German C. Fr. Greek. Soph. Chemistry (Ph. B.)	I. Latin. [II Government.] III. Latin. Fr. Mathematics. Soph. Chemistry (Ph. B.) Jun. English.	I. Latin. II. English. III. Latin. Fr. Mathematics. [Soph. Mechanics.] <i>Soph. Geology.</i> Jun. English.	I. Latin. II. Gr. History. III. Latin. German A.	I. Latin. II. English. III. Latin. French C. Fr. Mathematics. Soph. Chemistry (Ph. B.)
2 9:20	II. Latin. III. Elocution Soph. Chemistry (Ph. B.) continued. Jun. Physics.	II. Latin. Fr. English. Soph. Chemistry (Ph. B.) continued Jun. Political Economy.	II. Latin.  German A.  Jun. Physics.	II. Latin. Fr. Greek. [Soph. Mechanics.] <i>Soph. Analytical Geom.</i> Jun. Political Economy.	II. Latin. IV. Mathematics. Soph. Latin. Soph. Chemistry (Ph. B.) continued. Jun. Physics.
10:10	CHAPEL.	CHAPEL.	CHAPEL.	CHAPEL.	CHAPEL.
3 10:30	I. Algebra.  German A.  Soph. Greek.	I. Algebra. III. Geometry. IV. English. French C. Soph. Chemistry (Ph. B.) continued. Soph. Greek	I. Algebra. III. Geometry.  German B.  Soph. Greek.	I. Algebra. III. Geometry.  German B. Soph. Greek. Sen. English.	I. Algebra. III. Geometry.  German B.  Junior English.



4	11:20	II. Greek. [II. Physiography.] III. <i>Physiology</i> . IV. Latin. French A. Soph. Chemistry (A. B.) [Sen. Astronomy.] <i>Sen. English.</i>	II. Greek. [II. Physiography.] III. <i>Physiology</i> . IV. Latin. French A. Soph. Chemistry (A. B.) [Sen. Astronomy.]	I. Elocution. [II. Physiography.] III. <i>Physiology</i> . IV. Latin. French A. Soph. Chemistry (A. B.) [Sen. Astronomy.]	II. Greek. [II. Physiography.] III. <i>Physiology</i> . IV. Elocution. French A. Soph. Chemistry (A. B.) Sen. English.
5	12:10	III. Greek. Fr. English. Soph. Chemistry (A. B.) continued. Soph. Geology.	I. English. II. <i>and II. Eng. History</i> . III. Government. III. Greek. Fr. English. Soph. Chemistry (A. B.) continued. Soph. Geology.	I. <i>and II. Eng. History</i> . [II. Government.] III. Greek. Fr. English. Soph. Chemistry (A. B.) continued. Soph. Geology.	I. English. III. Greek. III. Physics. Fr. Latin. Soph. Chemistry (A. B.) continued. Soph. Geology.
6	2:30	IV. Greek. IV. Chemistry. Fr. Biology. Jun. Physics. Sen. Elocution.	IV. Greek. IV. Chemistry. Fr. Biology. Soph. English. [Jun. Logic.] <i>Jun. Psychology</i> . Sen. Elocution.	III. Physics. IV. Greek. Fr. Mathematics Soph. Chemistry (Ph. B.) [Jun. Logic.] <i>Jun. Psychology</i> . [Sen. Astronomy.]	IV. Greek. IV. Chemistry. French B. [Jun. Logic.] <i>Jun. Psychology</i> . [Sen. Astronomy.]
7	3:20	I. English. III. English. IV. Chemistry, cont'd. Fr. Latin. Fr. Biology, continued. Jun. Physics, continued.	I. Elocution. II. Drawing. IV. Mathematics. Fr. Biology, continued. Fr. Greek. [Sen. Hist. of Phil.] <i>Sen. Ethics</i> .	I. English. II. Algebra. III. Physics, continued. Fr. Elocution. Soph. Chemistry (Ph. B.) continued. Soph. Latin. [Sen. Hist. of Phil.] <i>Sen. Ethics</i> .	[I. Roman History.] IV. Chemistry, cont'd [Soph. Mechanics.] <i>Soph. And. Geometry</i> . [Sen. Hist. of Phil.] <i>Sen. Ethics</i> .
8	4:10	German B. Soph. Latin.	German A. [Sen. English.]	II. Drawing, continued. French B.	French B. Sen. Hist. of Phil. (Seminary.)

[Bracketed titles] are for first half-year only. *Italicized titles* are for second half-year only.



GATEWAY AND PIKE'S PEAK.  
GARDEN OF THE GODS.

## The Gutler Academy.

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This fitting-school, named in honor of one of the most generous and steadfast friends of Colorado College, (Henry Cutler, of Massachusetts), provides a thorough preparation for any college in the United States. While the preparatory training is the principal aim, the plan of study is so arranged as to meet the requirements of students who do not propose going on into college work. The course is a thorough one, embracing four years, and the teaching is carefully conducted by experienced instructors, most of whom are also engaged in the work of the College.

Correspondence concerning the Cutler Academy should be addressed to M. C. GILE, Assistant Principal.

## FACULTY.

WILLIAM FREDERICK SLOCUM, JR.,  
*Principal.*

M. CLEMENT GILE, *Greek,*  
*Assistant Principal.*

SUSAN ALMIRA BACON,  
*French and German.*

FLORIAN CAJORI,  
*Physics.*

FRANCIS WHITTEMORE CRAGIN,  
*Physiology and Physiography.*

GEORGE A. H. FRASER,  
*Latin.*

WILLIAM M. HALL,  
*History.*

C. ST. JOHN HOFMAN,  
*Drawing.*

FRANK HERBERT LOUD,  
*Mathematics.*

ATHERTON NOYES,  
*English and Greek.*

MARION MCGREGOR NOYES,  
*Latin.*

EDWARD S. PARSONS,  
*English.*

WILLIAM STRIEBY,  
*Chemistry.*

HELEN MARGARET RING,  
*English and Elocution.*

## REQUIREMENTS FOR ADMISSION.

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Candidates for admission to the Cutler Academy are expected to have finished the eighth grammar grade in the public schools, or to have covered an equivalent of the following work:

ARITHMETIC—Franklin or Wentworth.

ENGLISH—Reed and Kellogg's Higher Lessons.

HISTORY—Montgomery's United States History.

GEOGRAPHY—Any school geography.

Applicants for admission who have, within six months, been students in the Colorado Springs High School, must present certificates from the High School showing completion of the work of the grade preparatory to the Academy class which they wish to enter. The High School will, upon payment of a small fee, provide special examinations for this purpose, if the regular examinations were not passed. The Academy will not examine such applicants, unless upon subjects which were not included in their High School course.

Candidates for admission in 1894 are expected to present themselves at Palmer Hall on Tuesday, June 5, or Tuesday, Sept. 18, at 9 A. M. Every applicant for admission must bring a satisfactory certificate of good moral character, together with a full written statement of studies pursued elsewhere. Any student whose influence is felt to be injurious to good scholarship or good morals, will not be permitted to remain in the Academy.

# COURSES OF INSTRUCTION.

## CLASSICAL COURSE.

### FIRST YEAR.

[The figures denote the number of recitations a week.]

FIRST HALF:	<i>Latin:</i> Beginner's Latin Book. Collar's Gradatim, . . . . .	5
	<i>Algebra:</i> Through fractions. . . . .	5
	<i>English:</i> Shaw's English Composition; Constant writing of exercises in dictation, reproduction, and invention; advanced grammar in connection with the writing exercises. Miles Standish: Birds and Bees (Burroughs); Selections from Hawthorne. . . . .	4
	Required Supplementary Readings see page 60.	
	<i>History:</i> Roman. . . . .	2
	<i>Elocution:</i> Emerson's Evolution of Expression, Vol. 1. . . . .	2
SECOND HALF:	<i>Latin:</i> Beginner's Book Completed. Reading at Sight (Gradatim). Collar's Gate to Cæsar, . . . . .	5
	<i>Algebra:</i> Through Radicals and easy Quadratic Equations, . . . . .	5
	<i>English:</i> Shaw's Composition completed; Figurative language; letter writing; diction; simple abstracts and outlines; narrative compositions. Selections from Whittier; Tales from Shakespeare. . . . .	4
	Required Supplementary Readings, see page 60.	
	<i>History:</i> English, . . . . .	2
	<i>Elocution:</i> Emerson's Evolution of Expression, Vol. II. . . . .	2

### SECOND YEAR.

FIRST HALF:	<i>Latin:</i> Grammar (Allen and Greenough). Cæsar's Gallic War Books II, III, IV. Prose Composition (Daniell). Reading at sight, . . . . .	5
	<i>Greek:</i> Grammar (Hadley-Allen). Frost's Primer. First Greek Reader (Moss), . . . . .	4
	<i>English.</i> Genung's Outlines of Rhetoric; choice of words; phraseology: constant writing. Evangeline; Irving's Sketch Book. . . . .	3
	Required Supplementary Readings, see page 60.	
	<i>Algebra:</i> Quadratic Equations completed, . . . . .	2
	<i>History:</i> Greek, . . . . .	1
SECOND HALF:	<i>Government,</i> . . . . .	2
	<i>Latin:</i> Grammar. Cæsar, Bk. I. Ovid, Stories from the Metamorphoses. Reading at Sight. Prose Composition, . . . . .	5
	<i>Greek:</i> Grammar. Xenophon (Coy's First Greek Reader). Reading at Sight. . . . .	4
	<i>English:</i> Genung continued; Special study of style; the sentence Marmion; Twice Told Tales. . . . .	3
	Required Supplementary Readings, see page 60.	
	<i>Algebra:</i> Proportions, Progressions, and allied topics . . . . .	2
	<i>History:</i> English and Greek. . . . .	3



### THIRD YEAR.

#### FIRST HALF:

<i>Latin:</i> Grammar. Cicero: Four Orations against Catiline. Reading at Sight. Prose Composition. (Daniell), . . . . .	5
<i>Greek:</i> Xenophon's Anabasis (Kelsey), two books. Reading at Sight. Written Translations. Composition (Woodruff), . . . . .	5
<i>Geometry:</i> Books I and II, of Taylor's Euclid or of Wentworth. . . . .	4
<i>English:</i> Genung completed: The paragraph; the whole composition; preparation of themes. Merchant of Venice; Midsummer Night's Dream. Required Supplementary Readings, see page 60.	3
<i>Elocution:</i> Emerson's Evolution of Expression, Vol. III.	2

#### SECOND HALF:

<i>Latin:</i> Grammar. Cicero: Orations for Archias, for Marcellus, and for the Manilian Law. Vergil: Bucolics. Reading at Sight. Prose Composition, . . . . .	5
<i>Greek:</i> Xenophon's Anabasis, two books, or equivalent. Reading at Sight. Composition, . . . . .	5
<i>Geometry:</i> Plane Geometry completed, . . . . .	5
<i>English:</i> Webster's first Bunker Hill Oration; Silas Marner: The Rivals (Sheridan); She Stoops to Conquer (Goldsmith). Readings, discussions, analysis, themes, . . . . .	3
Required Supplementary Readings, see page 60.	
<i>Elocution:</i> Emerson's Evolution of Expression, Vol. IV.	2

### FOURTH YEAR.

#### FIRST HALF:

<i>Latin:</i> Grammar. Vergil: Aeneid, Bks. I-IV. Reading at Sight. Prose Composition, . . . . .	5
<i>Greek:</i> Homer and Herodotus (Merry's Specimens of Greek Dialects). Composition. Reading at Sight, . . . . .	5
<i>German:</i> Grammar. Composition. Reading of easy prose selections, . . . . .	4
<i>Mathematics:</i> Review and General Exercises. . . . .	2
<i>English:</i> Selections from the poems of Burns, Goldsmith and Lowell; De Quincey's "The English Mail Coach." Emerson's Essays on History, Behaviour, Self-Reliance. Readings, discussions, themes, . . . . .	1
Required Supplementary Readings, see page 60.	

#### SECOND HALF:

<i>Latin:</i> Grammar. Vergil: Aeneid, Bks. V-VI. Reading at Sight. Prose Composition. Reviews, . . . . .	5
<i>Greek:</i> Homer's Odyssey, three books. Written Translations. Old Greek Life (Mahaffy). History of Greek Literature (Jebb). Composition, . . . . .	5
<i>German:</i> Grammar. Composition. Rapid reading of prose selections. Reading at Sight, . . . . .	4
<i>Mathematics:</i> Review and General Exercises, . . . . .	2
<i>English:</i> Milton's L'Allegro, Il Penseroso, Comus, and Lycidas re-read; Macaulay's Essay on Milton. Essays, . . . . .	1
Required Supplementary Readings, see page 60.	

FIRST YEAR.

[The figures denote the number of recitations a week.]

FIRST HALF:	{	<i>Latin</i> : Beginner's Latin Book. Collar's Gradatim, . . . . .	5
		<i>Algebra</i> : Through fractions, . . . . .	5
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	4
		<i>History</i> : Roman, . . . . .	2
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. I, . . . . .	2
SECOND HALF:	{	<i>Latin</i> : Beginner's Book completed. Reading at Sight (Gradatim). Collar's Gate to Cæsar, . . . . .	5
		<i>Algebra</i> : Through Radicals and Easy Quadratic Equations, . . . . .	5
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	4
		<i>History</i> : English, . . . . .	2
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. II, . . . . .	2

SECOND YEAR.

FIRST HALF:	{	<i>Latin</i> : Grammar (Allen and Greenough). Cæsar's Gallic War, Books II, III, IV. Prose Composition (Daniell). Reading at Sight, . . . . .	5
		<i>Physiography</i> : Appleton's Physical Geography Recitations and Lectures, . . . . .	4
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	3
		<i>Algebra</i> : Quadratic Equations completed, . . . . .	2
		<i>Government</i> , . . . . .	2
SECOND HALF:	{	<i>Drawing</i> , . . . . .	1
		<i>Latin</i> : Grammar, Cæsar, Bk. I. Ovid: Stories from the Metamorphoses. Reading at Sight. Prose Composition, . . . . .	5
		<i>Physiology</i> : Huxley's Elementary Lessons in Physiology. Martin's Human Body, . . . . .	4
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	3
		<i>Algebra</i> : Proportions, Progressions, and allied topics, . . . . .	2
		<i>History</i> : English, . . . . .	2
		<i>Drawing</i> , . . . . .	1

### THIRD YEAR.

FIRST HALF:	<i>Latin</i> : Grammar. Cicero: Four Orations against Catiline. Reading at Sight	Prose Composition (Daniell),	5
	<i>Physics</i> : Text-book and Laboratory Practice.		4
	<i>Geometry</i> : Taylor's Euclid, or Wentworth, Books I and II,		4
	<i>English</i> : As in corresponding year and term of Classical Course,		3
	<i>Elocution</i> : Emerson's Evolution of Expression, Vol. III,		2
SECOND HALF:	<i>Latin</i> : Grammar. Cicero: Orations for Archias, for Marcellus, and for the Manilian Law. Vergil: Bucolics. Reading at Sight.	Prose Composition,	5
	<i>Physics</i> : Text book and Laboratory Practice.		4
	<i>Geometry</i> : Plane Geometry completed,		4
	<i>English</i> : As in corresponding year and term of Classical Course,		3
	<i>Elocution</i> : Emerson's Evolution of Expression, Vol. IV,		2

### FOURTH YEAR.

FIRST HALF:	<i>Latin</i> : Grammar. Vergil: Aeneid, Bks I-IV. Reading at Sight.	Prose Composition,	5
	<i>German</i> : Grammar. Composition. Reading of easy prose selections,		4
	<i>Chemistry</i> : Williams' Introduction to Chemical Science. Laboratory Practice,		4
	<i>Mathematics</i> : Review and general exercises.		2
	<i>English</i> : As in corresponding year and term of Classical Course,		1
SECOND HALF:	<i>Latin</i> : Grammar. Vergil: Aeneid, Bks V-VI. Reading at Sight.	Prose Composition. Reviews,	5
	<i>German</i> : Grammar. Composition. Rapid reading of prose selections. Reading at Sight,		4
	<i>Chemistry</i> : Work of first term continued,		4
	<i>Mathematics</i> : Review and general exercises.		2
	<i>English</i> : As in corresponding year and term of Classical Course,		1

# SCIENTIFIC COURSE.

## FIRST YEAR.

[The figures denote the number of recitations a week.]

FIRST HALF:	{	<i>Latin:</i> Beginner's Latin Book. Collar's Gradatim, . . . . .	5
		<i>Algebra:</i> Through fractions. . . . .	5
		<i>English:</i> As in corresponding year and term of Classical Course, . . . . .	4
		<i>History:</i> Roman, . . . . .	2
		<i>Elocution:</i> Emerson's Evolution of Expression, Vol. I, . . . . .	2
SECOND HALF:	{	<i>Latin:</i> Beginner's Book completed. Reading at Sight (Gradatim). Collar's Gate to Cæsar. . . . .	5
		<i>Algebra:</i> Through Radicals and Easy Quadratic Equations, . . . . .	5
		<i>English:</i> As in corresponding year and term of Classical Course, . . . . .	4
		<i>History:</i> English, . . . . .	2
		<i>Elocution:</i> Emerson's Evolution of Expression, Vol. II, . . . . .	2

## SECOND YEAR.

FIRST HALF:	{	<i>Latin;</i> Grammar (Allen and Greenough). Cæsar's Gallic War, Books II, III, IV. Prose Composition (Daniell). Reading at Sight, . . . . .	5
		<i>Physiography:</i> Appleton's Physical Geography. Recitations and Lectures, . . . . .	4
		<i>English:</i> As in corresponding year and term of Classical Course, . . . . .	3
		<i>Algebra:</i> Quadratic Equations completed, . . . . .	2
		<i>Government,</i> . . . . .	2
		<i>Drawing,</i> . . . . .	1
SECOND HALF:	{	<i>Latin:</i> Grammar. Cæsar, Bk. I. Ovid: Stories from the Metamorphoses. Reading at Sight. Prose Composition, . . . . .	5
		<i>Physiology:</i> Huxley's Elementary Lessons in Physiology. Martin's Human Body, . . . . .	4
		<i>English:</i> As in corresponding year and term of Classical Course, . . . . .	3
		<i>Algebra:</i> Proportions, Progressions, and allied topics, . . . . .	2
		<i>History:</i> English, . . . . .	2
		<i>Drawing:</i> . . . . .	1

### THIRD YEAR.

FIRST HALF:	{	<i>German</i> : Grammar. Composition. Reading of easy prose selections, . . . . .	4
		<i>Physics</i> : Text-book and Laboratory Practice. . . . .	4
		<i>Geometry</i> : Taylor's Euclid or Wentworth, Bks. I and II. . . . .	4
		<i>Algebra</i> : Review and general exercises, . . . . .	2
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	3
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. III, . . . . .	2
SECOND HALF:	{	<i>German</i> : Grammar. Composition. Rapid reading of prose selections. Reading at Sight, . . . . .	4
		<i>Physics</i> : Text-book and Laboratory Practice. . . . .	4
		<i>Geometry</i> : Plane Geometry completed . . . . .	4
		<i>Algebra</i> : Review and general exercises, . . . . .	2
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	3
		<i>Elocution</i> : Emerson's Evolution of Expression, Vol. IV, . . . . .	2

### FOURTH YEAR.

FIRST HALF:	{	<i>German</i> : Schiller: reading of one or more of the dramas. Lectures on German Literature . . . . .	4
		<i>French</i> : Grammar. Composition. Reading of easy prose selections, . . . . .	4
		<i>Chemistry</i> : Williams' Introduction to Chemical Science. Laboratory Practice, . . . . .	4
		<i>Mathematics</i> : Solid Geometry. Advanced Algebra, . . . . .	4
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	1
SECOND HALF:	{	<i>German</i> : Lessing: reading and critical study of one or more of the dramas. Lectures by the Instructor, . . . . .	4
		<i>French</i> : Grammar. Composition. Rapid reading of prose selections. Reading at Sight. . . . .	4
		<i>Chemistry</i> : Work of first term continued, . . . . .	4
		<i>Mathematics</i> : Plane and Spherical Trigonometry, . . . . .	4
		<i>English</i> : As in corresponding year and term of Classical Course, . . . . .	1

## APPENDIX.

## REQUIRED SUPPLEMENTARY READINGS FOR ACADEMY ENGLISH CLASSES.

*First Academy*—Selections from Longfellow and Whittier; Macaulay's Lays of Ancient Rome; Hawthorne's Wonder Book, Tanglewood Tales, House of Seven Gables, and Twice Told Tales; Aesop's Fables, Gulliver's Travels, Arabian Nights; Rab and His Friends; Birds and Bees, Sharp Eyes and other papers (Burroughs); Lamb's Tales from Shakespeare; Tom Brown at Rugby; Kingsley's Water Babies; A Dog from Flanders (Ouida)

*Second Academy*—Undine, Sintram, Paul and Virginia; The Boys' King Arthur, Idylls of the King (Tennyson), The Vision of Sir Launfal (Lowell); Wake Robin (Burroughs); The Vicar of Wakefield (Goldsmith); Tales of a Traveller (Irving); A Tale of Two Cities and A Christmas Carol (Dickens); In the Wilderness (Warner); Autobiography of Benjamin Franklin; The Chronicles of Froissart; Enoch Arden (Tennyson); Bryant's Iliad; Selections from Southey.

*Third Academy*—The Lady of the Lake, and The Lay of the Last Minstrel (Scott); Selections from Browning's Dramatic Idylls; Sesame and Lilies, Ethics of the Dust (Ruskin); Pepacton (Burroughs); Selections from the Essays of Elia (Lamb); Sketch Book (Irving); Marjorie Daw (Aldrich); Feats on the Fiord (Martineau); My Summer in a Garden (Warner); Last Days of Pompeii (Bulwer); Ivanhoe (Scott); Marjorie Fleming (Brown).

*Fourth Academy*—Palmer's Odyssey (or Leaf's Iliad); Selections from Emerson; Sohrab and Rustum, and The Forsaken Merchant (M. Arnold); Selections from Wordsworth; Elegy Written in a Country Churchyard (Gray); The Ancient Mariner (Coleridge); Guy Mannering and The Heart of Midlothian (Scott); Prue and I (Curtis); Silas Marner (George Eliot); The Man Without a Country (Hale); Picciola (Saintine); Abdallah (Taylor); Pride and Prejudice, or Northanger Abbey (Jane Austen).

NOTE—In the first and second years of the Academy all writing is done in composition books, which thus afford evidence of the progress that has been made.

## LATIN PRONUNCIATION.

The Roman system of pronouncing Latin is used in both Academy and College.



## Circular of Information.

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### LOCATION.

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The City of Colorado Springs is admirably adapted for a college town. At its very foundation plans were wisely laid, and the succeeding growth has maintained a most healthy character of morality and culture, to which has been added the element of wealth, increasing since the construction of radiating railroad systems, at a brisk, though not abnormal, rate. The result is a prosperous, wide-awake town, from which saloons and all attendant destructive influences are absent, having a population drawn from every section of the Union, as well as from England, and, in a slight degree, from other foreign countries; but, whether native or foreign, composed almost wholly of the better class of settlers; a town at present of about thirteen thousand inhabitants, but with all the conveniences of a larger city—water works, sewers, electric lights, electric street-railways, mail delivery, telephone connection north, south, and west. It is a noted health resort, but has none of the air of a hospital. But while it possesses the attractions of a city, the lover of nature may seek far for a spot more favored. The mountains are close at hand, and their serrated line occupies about one-third of the horizon. In the centre stands Pike's Peak, a name familiar everywhere, to whose summit henceforth the traveler may ascend by carriage or railway-car, or by romantic bridle paths, remote from the thronged lines of summer travel. The climate has obtained a world-wide reputation. Its curative qualities consist largely in the opportunity for outdoor exercise, afforded by the great number of fine days, to which the dryness and rarity of the air adds a

quality exhilarating to all, and regarded as a specific in cases of malarial disease, asthma, and incipient phthisis. Students unable to work in other climates may here continue their studies, while at the same time making a permanent gain in health. This plan has been successfully carried out in a number of instances.

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### SPECIAL STUDENTS.

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Special students will be received, at the discretion of the Faculty, into such classes as they are qualified to enter.

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### LIBRARY.

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A new and beautiful building, the gift of N. P. Coburn, of Newton, Massachusetts, has been erected during the past year, and is to be dedicated on the fourteenth of March, on which occasion President Wm. R. Harper, of the University of Chicago, will deliver the principal address. The corner stone was laid in June, 1893, during Commencement Week. Of the \$50,000 presented by Mr. Coburn to the college, \$45,000 has been expended upon the building, and the remaining \$5,000 forms part of the permanent library fund for the purchase of books. The new library is admirably fitted for its purpose, unusual care having been expended upon its construction. It contains, in addition to the main hall, with its alcoves and rooms for private study, a large hall below, which will be, for the present, used as the College Chapel, and in which will be held vesper services during the Spring. The building is finished throughout in oak. The architects are Messrs. Andrews, Jacques & Rantoul, of Boston. The library at present contains about 9,000 volumes and over 1,000 pamphlets. Valuable government publications are received regularly through the

courtesy of United States Senators Teller and Wolcott, and Representative Bell. A special effort is to be made to secure \$5,000, which can be expended immediately for books of reference in the various departments; and it is hoped that from funds available from all sources, about 1,000 volumes can be added annually. The purpose of the trustees is to make this a library for scholars and students—graduate and under-graduate. Dr. B. F. D. Adams, of Colorado Springs, has presented his valuable medical library to the College, to form the nucleus of the "Physicians' Alcove," and the El Paso Medical Society is interested in raising a sum for the same purpose.\*

The above full statement regarding the library is made with the hope that persons interested in the cause of higher education may be led to assist in the building up of a great library in this Rocky Mountain region.

During the year valuable books have been received from Mr. W. S. Jackson, of Colorado Springs; Mrs. C. C. Jackson, of Boston; Mrs. William Claflin, of Boston; Rev. O. B. Frothingham, of Boston; Mr. Charles H. Toll, of Denver; President William F. Slocum, of Colorado Springs; Miss Ellen Frothingham, of Colorado Springs; Miss Anna Fuller, of Colorado Springs; Dr. B. F. D. Adams, of Colorado Springs; estate of Dr. F. A. Hale, of Colorado Springs; Mr. Atherton Noyes, of Colorado Springs; College Library Book Club, of Colorado Springs.

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#### READING ROOMS.

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In connection with the library is a reading room for the use of students and friends of the College, where the current magazines of literature and science, as well as a number of leading newspapers, may be consulted. The Young Men's Christian Association of the College has also a similar room in Hagerman Hall.

\*Dr. Adams has offered to give \$500 towards a permanent fund of \$1,500, the income to be expended for works upon Medical, Hygiene and Sanitary Science.

## LABORATORIES AND APPARATUS.

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The laboratories of the College supply the means for thorough and practical training in the scientific branches of the curriculum.

During the past year considerable additions have been made to the physical laboratory.

A good telescope of five inches aperture, equatorially mounted on a tripod, was presented to the College in September, 1892, by Henry R. Wolcott, Esq., of Denver.

A fine stereopticon, operated with the calcium light, may be used by all departments of the College, in presenting those topics which are suitable for pictorial illustration. About six hundred selected photographic views, covering many subjects, are now in the possession of the College.

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## MUSEUM.

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Large accessions have recently been made to the College Museum, the most notable being some two thousand specimens of invertebrate fossils, from the lower Cretaceous of Kansas, obtained as a result of the Colorado College Exploring Expedition of 1893. The field which yielded these is comparatively new to science, being a northern, island-like remnant of the "Gulf Cretaceous," a series of great geological importance, represented by several thousand feet of strata in Texas and Mexico, but wholly lacking from beneath the middle Cretaceous (Dakota sandstone) of the northern interior part of the United States.

Mr. Wilmer Culver, a member of the Sophomore class of 1892-93, has donated to the College a cabinet of geological specimens, chiefly minerals, collected by his father, the late N. S. Culver, M. D. It has not yet been found practicable to remove these specimens from the

boxes containing them, owing to the lack of suitable cases in which to place them.

Part of a marine saurian from the upper Cretaceous has recently been secured for the Museum, through the kind offices of Prof. Stone, formerly of the College corps of instruction.

A vertebra measuring thirteen inches across the centrum, and pertaining to *Atlantosaurus*, the largest known land animal of all geological time, is an interesting accession from Jurassic rock, near Canon City.

A large specimen of *Baculites ovatus* and one of *Inoceramus pertenuis*, from the Fox Hills shale of this vicinity, have recently been contributed by Mr. Charles Wilmott Dawson.

The instructor in geology is now placing in the Museum, as a loan collection, a paleontological cabinet valued at several thousand dollars, and including remains of Quaternary camels and horses, Tertiary American rhinoceroses and mastodons, Cretaceous saurians and fishes, and a very large series of shells, echinoderms, and other invertebrates from the lower Cretaceous of Texas, besides numerous other interesting specimens, both geological and zoological.

The mineral cabinet of Mr. L. Cahn, comprising an excellent line of forms from El Paso county, as well as a valuable general collection, with many unique specimens, is soon to be placed in the Museum as a loan collection and will be especially helpful to students of crystallography, since it is to the collecting of crystallized specimens that Mr. Cahn devotes especial attention.

The College has recently purchased a fine mounted skeleton of the Llama, and one of the large, fresh-water turtle, *Chelydra*. These, and skeletons of the Gray Wolf, Coyote, Wild Cat, and several smaller mammals obtained in southwestern Kansas, as part of the results of the College expedition of '93, are additions to the College



equipment that will greatly improve the facilities for instruction in Vertebrate Morphology and Paleontology. In this connection should be mentioned the skull of a grizzly bear, presented by Mr. C. E. Aiken, of Colorado Springs.

The rapid growth of the collections emphasizes the already great necessity for a building in which to utilize them. The fact that many boxes of valuable museum specimens lie useless in the College basement, and that this same material, expanded and properly arranged in museums and laboratories of Geology and Biology, would increase the College facilities for instruction both of students and of the general public, is an argument that should insure a prompt rally of all loyal friends of the College to the support of the munificent offer made by Dr. Pearsons, and that should make the financial provision for the urgently-needed Science Hall an assured achievement in much less than the few months that remain of the time for which that offer was extended.

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#### COLLEGE RESIDENCES.

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There are two substantial stone buildings on the College grounds, planned with reference to the needs of students. They are warmed by steam, lighted by electricity, and have every desirable convenience.

At Hagerman Hall, which provides for young men, is a dining room that may accommodate one hundred and fifty students. Those who room out of the building can secure meals here at low rates.

Montgomery Hall, given by the Woman's Educational Society of Colorado Springs, is very attractive, and provides a thoroughly comfortable home for twenty-six young ladies. Board and room may be obtained at low prices.



## EXERCISE AND ATHLETIC SPORTS.

There is every opportunity for outdoor sports. An excellent athletic ground is laid out on the College campus. Base-ball, foot-ball and tennis are played almost the entire College year.

## COLORADO COLLEGE SCIENTIFIC SOCIETY.

The Colorado College Scientific Society holds monthly meetings in Palmer Hall. The objects of the Society are: "The discussion of recent scientific results, the promotion among its members of scientific inquiry and investigation, and the publication of the more important papers read at its meetings." It was organized in January, 1890, and has already done some excellent work. Four annual publications, entitled "Colorado College Studies," have been issued, and a considerable number of exchanges from associations of like nature, including some foreign societies, has been secured. The attention which the "Studies" have received from scientific men everywhere, encourages the Society to continue this publication. The fifth volume will appear in May. The list of articles printed in the first four volumes is as follows:

## FIRST ANNUAL PUBLICATION—

A Rigorous Elementary Proof of the Binomial Theorem.—*F. H. Loud.*

On Certain Cubic Curves.—*F. H. Loud.*

A Study of the Inductive Theories of Bacon, Whewell and Mill.—*Benj. Ives Gilman.*

A Mathematical Text-book of the Last Century.—*F. Cajori.*

Horace, Od. III. 1. 34.—*George L. Hendrickson.*

Quinti Ciceronis Commentariolum Petitionis XI, § 43, (B. et K. vol. IX, p. 487).—*George L. Hendrickson.*

## SECOND ANNUAL PUBLICATION—

Witchcraft Among the Hindus.—*Dr. H. W. Magoun.*

Protection for Congressional Minorities.—*W. M. Hall.*

Pulsations in the Aortic Arches of the Earthworm.—*Miss. M. R. Mann.*

Dialectical Studies in West Virginia.—*Dr. Sylvester Primer.*

The Study of Diophantine Analysis in the United States.—*F. Cajori.*

The Elliptical Functions Defined Independently of the Calculus.  
*F: H Loud.*

On two Passages in the Crito.—*Dr. H. W. Magoun.*

Calibration of Burettes —*D. J. Carnegie.*

On a Passage in the Frogs.—*Dr. H. W. Magoun.*

Note on the Hadley-Allen Grammar.—*Dr. H. W. Magoun.*

Historical Note on the Differentiation of a Logarithm.—*F. Cajori.*

A Mathematical Error in the Century Dictionary.—*F. Cajori.*

#### THIRD ANNUAL PUBLICATION—

The Etymologies in the Servian Commentary to Vergil.—*Dr. W. P. Mustard.*

Notes on Jefferson's Draft of the Ordinance of 1784—*W. M Hall.*

Some Notes on Blaydes' Nubes—*Dr. A. T. Murray.*

On a passage in Euripides' Iphigenia Taurica—*Dr. A. T. Murray.*

Draper's Barograph—*Florian Cajori.*

The Conditional in German—*Dr. S. Primer.*

#### FOURTH ANNUAL PUBLICATION—

The Circular Locus—*F. H. Loud.*

On the Eight Lines usually Prefixed to Horat. Serm. I. 10.—  
*Dr. W. P. Mustard.*

State Bank Notes—*W. M. Hall.*

Students are encouraged to attend the meetings of the society.

The secretary of the society, to whom all correspondence, exchanges, etc., should be addressed, is Professor Florian Cajori.

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#### PUBLIC LECTURES.

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Three courses of lectures and conferences under the auspices of the College, are to be held in the Chapel, during the spring.

#### THE DUTIES AND PRIVILEGES OF CITIZENSHIP.

##### *Subjects—*

The Elements and Safeguards of Liberty.

The Relation of Constitutions to Other Law.

The Constitution of the United States.

Elections.

Party Organization, and Campaigns.

Abuses of Elections.

Legislative Bodies, State and National.

The Administration of Justice.

The Executive of the United States.

Internal Organization of States and Territories.

County Government.

Municipal Government.

Taxation.

PROF. WM. M. HALL.

#### IMPORTANT QUESTIONS IN FINANCE.

Three lectures by

HON. JOHN CAMPBELL,

HON. N. P. HILL,

J. J. HAGERMAN, Esq.

#### POPULAR LECTURES.

1. Dust.

PROF. CAJORI.

2. A Story of Old Oceans and Lakes.

PROF. CRAGIN.

3. Ventilation through Chimneys and Fireplaces.

PROF. STRIEBY.

4. The Influence of Neo-Platonism on the History of Christian Thought.

PRESIDENT SLOCUM.

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#### COLLEGE SERMONS, 1894.

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The services at which these sermons are to be preached, are held in the College Chapel on Sunday afternoon, at half past four. They offer to the students and all others who wish to avail themselves of it, an opportunity to hear the presentation of important religious themes by a number of the representative clergymen of the state.

The following is a list of the preachers for this year: Rev. James B. Gregg, D. D.; Rev. Kerr B. Tupper, D.

D.; Rev. H. Martyn Hart, D. D.; Rabbi William S. Friedman; Chancellor F. W. McDowell, LL. D.; Rev. W. G. R. Mellen; Rev. J. N. Freeman, D. D.

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### STUDENTS' SOCIETIES.

Associations, of both young men and young women, have been organized in the College, in affiliation with the College Christian Associations of the country, and are useful in promoting the fellowship of students in ways that harmonize with Christian aspiration and effort. A reading room is supported by the young men's association, lectures are given from time to time by various speakers, and religious meetings are held weekly.

The three literary societies of the College furnish opportunity for independent work and drill in public debate and parliamentary practice.

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### MUSIC.

Arrangements have been made with the leading music teachers of the city, whereby members of the College or Academy may have lessons at special rates. A music room has been fitted up, and the lessons are all given on the College grounds.

The College Choral Union meets weekly under a competent director.

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### A R T .

A Studio has been opened in one of the College buildings, where College or Academy students may have the advantage of instruction in Oils, Water Colors, China Painting, or Pencil and Charcoal Drawing, under a skilled teacher.

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### PRIZE SPEAKING.

A Prize Oratorical Contest is held each year, open to

all members of the College. A prize is awarded by a committee of judges selected by the contestants.

A Prize Declamation Contest is held each year, open to members of the Cutler Academy.

### EXPENSES.

Tuition, per year.....	\$35 00
Matriculation fee.....	5 00
Library fee.....	3 00
Table board, in Hagerman Hall, per week.....	4 00
Rooms warmed and furnished, per week, from.....\$1.00 to	2 00
(Towels, bed-linen and blankets must be provided by the students.)	
Expenses at Montgomery Hall, including light and heat, per week .....	6 00

### COLLEGE BILLS.

The term bills are issued September 20 and February 12, and are payable immediately, unless special arrangements are made with the President.

Students who leave before the end of the term pay full tuition, except under very unusual circumstances.

### PECUNIARY ASSISTANCE

#### SCHOLARSHIPS.

The income of the following scholarships is devoted to the aid of worthy students who may need assistance in completing their course:

The Thomas Davee Scholarship of \$500, established by the late Mrs. T. V. D. Mitchell, of West Minot, Maine.

The Rice Scholarship of \$700, established by friends of the Rev. Charles B. Rice, of Danvers, Mass.

The Currier Scholarship of \$1,000, founded by the late Hon. Warren Currier, of St. Louis, Mo.

The Edwards Scholarship of \$500, given by the Congregational Church of Wellesley Hills, Mass.

The Mary Caroline Quincy Scholarship of \$500, given by Mr. George Henry Quincy, of Boston, Mass.

The Lawrence Myers Scholarship of \$1,000, and the

Lucy Platt Myers Scholarship of \$1,000, given by Mrs. Laetitia M. Myers, of Plainfield, New Jersey.

Several other scholarships are supported by annual subscription.

#### SELF-SUPPORT.

Good scholars have opportunities for private teaching, and any young man can find work in town. Some students have paid all their expenses by current earnings; but the attempt to do this should be avoided if possible, because of its necessary hindrance to good scholarship.

THE WOMAN'S EDUCATIONAL SOCIETY OF COLORADO COLLEGE was formed in April, 1889, by the ladies of Colorado Springs. The purpose of the society is "to give physical, intellectual and spiritual aid to young women who are students in any department of Colorado College." It has now about one hundred and fifty members. The society is at present raising scholarship funds for young women. The membership fees go to form a beneficiary fund, from which loans are to be made on the following conditions:

*First*—Loans may be made to girls who have been in the College one term, and are recommended by the Faculty as in every way deserving of such aid.

*Second*—No student shall be allowed to incur an indebtedness to the society of more than \$300.

*Third*—Students may receive loans without interest until their connection with the College ceases; after which their notes are to draw interest at 4 per cent.

The officers for the society for the current year, are:

*President*—MRS. WILLIAM F. SLOCUM.

*Secretary*—MRS. EDWARD W. BACON.

*Treasurer*—MRS. FRANCES E. LESSLIE.

#### FORM OF BEQUEST.

Those who intend to devise property to Colorado College are requested to employ the following Form of Bequest:

"I hereby give, devise and bequeath unto The Colorado College, of Colorado Springs, Colorado, the sum of ..... dollars."

If other than money is willed, the Form should be varied to suit the kind of property which it is desired to bequeath.





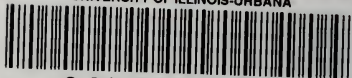








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